

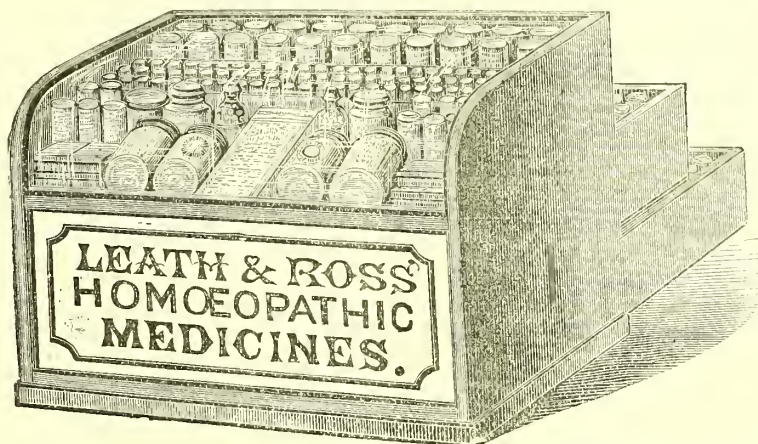
# LEATH & ROSS'S HOMŒOPATHIC PHARMACIES

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Contents realise £17 17s. 8d.

DIMENSIONS.—Length, 18 in.;  
Breadth, 13 in.; Height, 13 in.



DESCRIPTION.—A Handsome Bent Glass Case, with three drawers, the contents of top drawer visible, the Pilules and Tinctures arranged in the other two in alphabetical order.

## WHOLESALE PRICE LIST OF MEDICINES PUT UP READY FOR SALE.

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|----------------|-----|-----|----------------|
| Sixpenny Tubes | ... | ... | 2/9 per dozen. |
| Ninepenny „    | ... | ... | 4/3 „          |
| Shilling „     | ... | ... | 5/- „          |

### TINCTURES or TRITURATIONS—

|                  |     |     |               |
|------------------|-----|-----|---------------|
| Sixpenny Bottles | ... | ... | 2/9 per dozen |
| Ninepenny „      | ... | ... | 4/3 „         |
| Shilling „       | ... | ... | 5/- „         |

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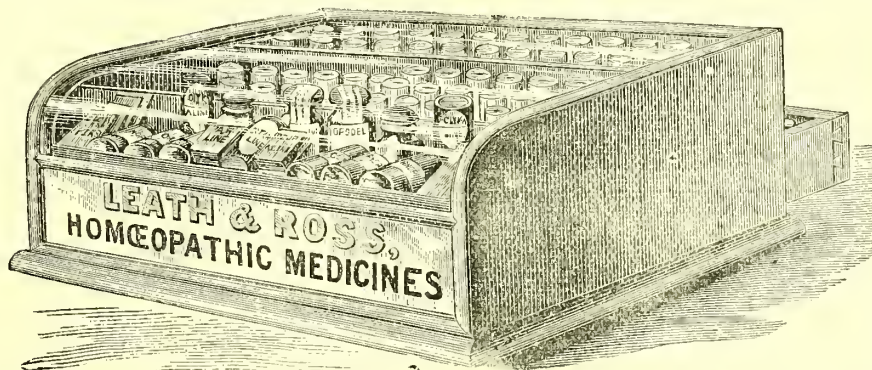
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|----------------------------|------|-----|------|--------------------|-----|-----|------|------------------------|-----|------|
| Neuraline                  | ...  | ... | 1/1½ | Berberine          | ... | ... | 1/1½ | Linimentum Auricularis | ... | 1/1½ |
| Glykaline                  | ...  | ... | 1/1½ | Chilblain Liniment | ... | ... | 1/1½ | Bryonia Liniment       | ... | 1/1½ |
| Phospho-muriate of Quinine | 1 1½ |     |      | Odontagie Essence  | ... | ... | 1/1½ | Corn Eradicator        | ... | 1/1½ |

All the above Proprietary Articles, 9/6 per dozen.

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Contents realise £10 18s. 3d.

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Breadth, 15½ in.; Height, 9½ in.



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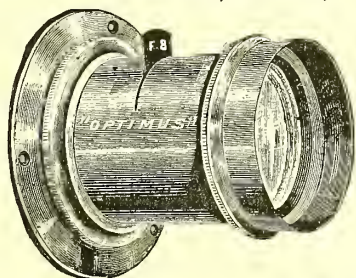
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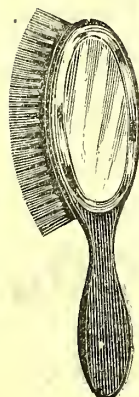
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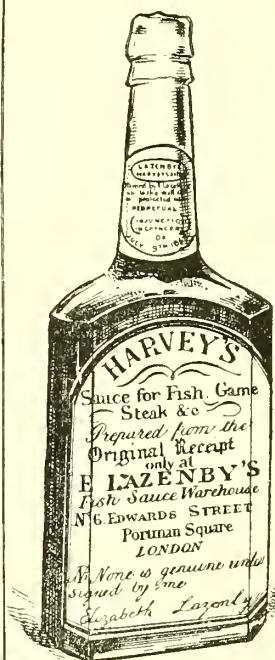
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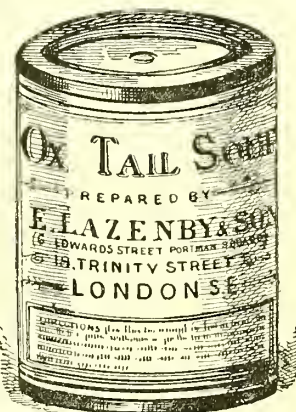
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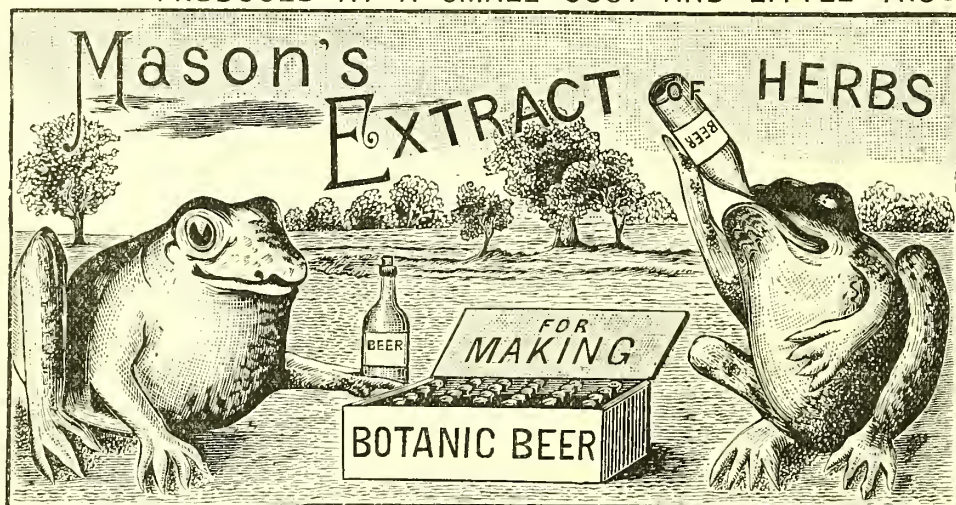
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7 to 12 Aldersgate Street, London, E.C.... Both the Soda and the Potash Water are in my opinion excellent.  
Signed, J. THOMPSON.From J. CAMERON, Esq., M.D., &c., Medical Officer of Health, Hendon, N.W.  
Dear Sir,—Having used and examined the waters prepared by the Chemists' Aërated and Mineral Waters Company, I am of opinion that they are of pure quality, well charged with gas, and, being prepared according to the formula of the British Pharmacopœia, they contain a fixed quantity of various salts, which are useful in the treatment of disease.

I am, dear Sir, yours truly,

Signed, JAMES CAMERON, M.D., &amp;c.

From A. S. THORBURN, Esq., M.D., L.R.C.S., 7 Catherine St., Strand, W.C.  
To the Secretary.

Dear Sir,—I have used your waters for some years, and am so perfectly satisfied with the quality, purity, and aëration, that I recommend them with confidence to my patients. I think that your system of making waters up to strength as prescribed by the British Pharmacopœia and stating that fact on bottles, &amp;c., is an excellent one, and one that I have not noticed elsewhere. (Signed) A. S. THORBURN, M.D., L.R.C.S.

From ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN  
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Dear Sir,—I have much pleasure in answering your question as to the feeling that has been expressed by the authorities of this hospital in reference to the mineral waters supplied by the Chemists' Aërated Waters Association. Allow me to state that we have now used your Association's waters for a considerable time and we have invariably found them as good as good could be; I have not once had any complaint as to them—on the contrary.

Yours truly,

Signed, ST. VINCENT MERCIER, Secretary.

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Dear Sir,—I have much pleasure in saying that the aërated waters supplied by your Association to the North London Consumption Hospital for several years were very good in quality and purity.

Yours faithfully,

Signed, W. HORNIBROOK, Secretary.

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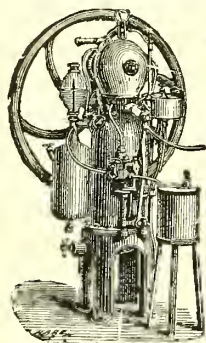
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MONDOLLOT'S PATENT

[PARIS, 1878.

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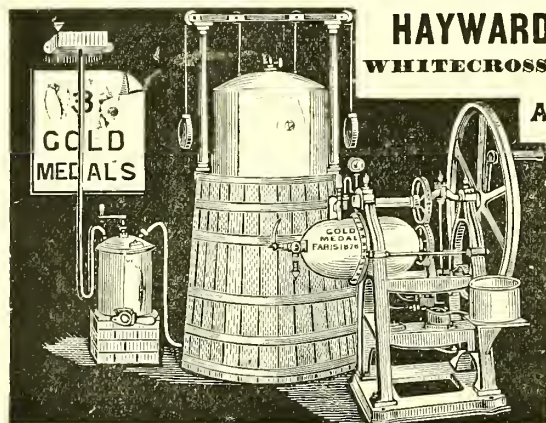
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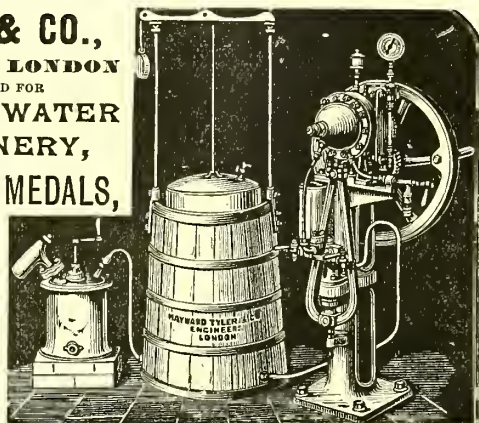
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LONDON,

1884.

CALCUTTA,

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Fig. 9. Boxwood Bottle Openers, polished .. 8/6 per gross  
Ditto, fitted with indiarubber inside .. 10/6  
Fig. 10. New Bottle Opener, fitted with rubber .. 6/

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Fig. 3.

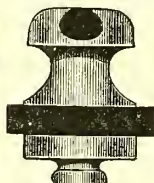


Fig. 6.

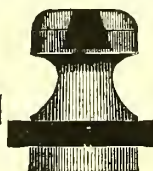


Fig. 1.

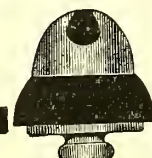


Fig. 7.

It will be seen by reference to figs. 6 and 7 that I now form a button or nut under the base of my Stopper for the purpose of easily extracting same from the Bottle without spoiling or removing the indiarubber from the body of the Stopper. This is readily accomplished by the use of a suitable tool made to fit on the nut; the Stopper being grasped in withdrawn from the bottle in a second, without injury to the Stopper. Therefore, it will be a great saving to Mineral Water Manufacturers, as by the old way of extracting the Stoppers from the Bottle, when necessary, very often the indiarubber is spoiled, and the time it takes by this slow process is worth more than the Bottle itself; so that in many instances Bottles with spoiled or dirty Stoppers are put aside as worthless stock.

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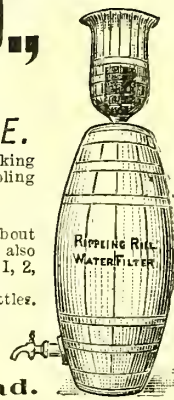
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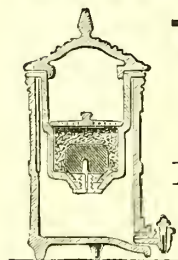
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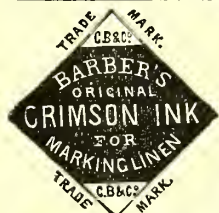
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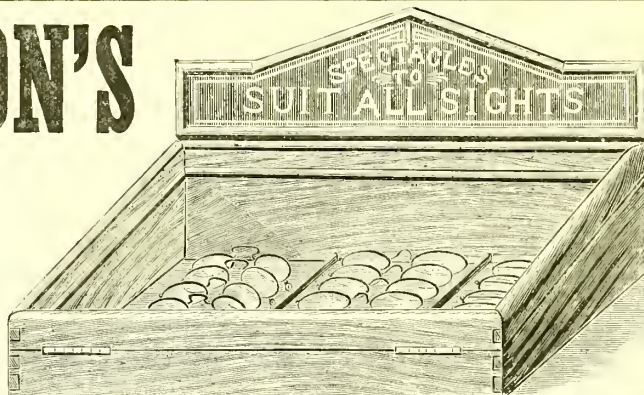
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*(See SYMPHONS AND ESSENCES.)*  
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Toogood, W.

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[See SURGICAL.]

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Evans, Lescher and Webb  
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Maw, Son and Thompson  
May, Roberts and Co.  
Newbery, F., and Sons  
Pattinson, Geo.  
Sanger and Sons  
Savars  
Schutze and Co.  
Thompson, Millard  
Toogood

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Meadowcroft, W.  
Rooke, Tompitt (Eucalyptus)  
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Heaton, Squire and Francis  
Stearns, F., and Co.  
Thompson, H. A. & Son

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Foulkes

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Bourne, Johnson and Latimer  
Hearn, Ridell and Co.  
Kilner Bros.  
Lang, J. and J.  
Maw, Son and Co. (Thomson)  
May Roberts  
Thompson, Millard  
Toogood, W.

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Dunlop, Mitchell and Co.  
Malignen (Filtre Rapide)  
Mawson Swan, and Weddell  
Slack & Brownlow  
Silicated Carbn Filtr Co.

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Edge Bros., Lim. (Esseuce of beef)  
Goodall, Backhouse and Co.  
Heaton, Squire (Malted)  
King, Fredk., and Co. (Soups)  
Lazenby, E., and Son  
Nestle, H.  
Savory and Moore (Pancreatic)  
Savory (Peptonised Milk)  
Southall Bros. and Barclay  
Van Abbott (Diabetic)

**FORMULE**

Brooks, T.

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Hynam, J.  
Mumford, G. S.  
Rouse and Co.

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Maud, W. R. (Self-acting)

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Harston and Co.  
Hay, W.  
Kimmond  
Meadowcroft, W. (Essence of)  
Mills, R. M.  
Ross and Co.  
Schweppe (Dry)  
Sumner, R., and Co.

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Pattinson, George

**GLYCERINE**

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Martindale, W. (Nitro-Glycerine Tablets)  
Price's Candie Co.

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Bates and Co.  
Bush, W., and Co.  
Evans, Sons  
Stearns, F., and Co.  
Wright, Layman and Umney

**GUMS**

Fink (Arabic, &c.)

**GUTTAPERCHA**

Duncan, Flockhart  
Stevens, P. A. (White)

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Bates, T. W. (Frizzette)  
Capper, W. B. (Crimidine)  
Cheesebrough Mfg. Co.  
James and Co.  
Murphy, E. (Walnut Pomade)  
Rimmel  
Towle Toilet Cream (Thorn-ton's)

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Jamieson and Co.  
New Military Blacking Co. (Empress Gloss, &c.)

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Coffin, A. I., and Co.  
De souzier, Henri  
Newall and Mason (Extract of Herbs)  
Peck and Velsor  
Potter and Clarke

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Gould, E., and Son  
Keene and Ashwell  
Leath and Ross  
Thompson and Capper

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Hay, W.

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London Homeopathic

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Fletcher, Fletcher and Steven-  
son  
Typeke and King

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Maw, S., Son and Thompson  
Toogood, W.

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Bewley and Draper  
Duncan, Flockhart  
Jamieson Bros.

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Steiner and Co.  
Sumner, R., and Co.

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Montserrat (see Evans)

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Newsome (Surgaceous)  
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Seabury and Johnson

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Lynch and Co.  
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Randall and Son  
Raines and Co. (Rose)  
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Warrick Brothers

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Werner and Pfleiderer

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Bishop, A.  
Dinnelcor (Fluid)  
Henry, T., and H. (Calcined)  
Murray, Sir James (Rosa)

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Drysdaile and Co. (Dry)  
Poths (Dr. Linck's)  
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Cocking and Co.  
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Seddon, J. and T.

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Grindley (Petroleum Jelly)  
Herrings and Co.  
Metcalf, Theo., & Co.  
Saunders, C.

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Trade Marks Protection Ass.

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British College (Morrison's)  
Burgess, E. (Lion Ointment)  
Carter's Liver Pills  
Crouch, F. B. (Wafers)  
Edwards and Son  
Evans, Lescher (Hawley's Counter Adjuncts)  
Fenning's (Powders)  
George and Welch (Liver)  
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Henry's Indian Remedies  
Hirst, Brooke, and Hirst  
Holloway (Pills and Oint.)  
Hop Bitters  
Horsford (Acid Phosphate)  
Kay Bros.  
King's Citrate of Magnesia  
Lalor (Phosphoric, &c.)  
Lincoln (Clarke's Mix.)  
Lynch and Co.  
Maud, W. and R. (Worm Cakes)

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St. Dalmis (Bronchial, &c.)  
Stearns' Non-scented  
Stenhouse Patent Med. Co.  
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Thompson, Millard and Co.  
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Towle, E. (Penny Royal)

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Fletcher, Fletcher and Steven-  
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Jensen, C. L.  
Keene and Ashwell  
Newbery (Inclavin)  
Savory and Moore (Pancreatic Emulsion, Peptonised Milk)  
Sellers, J.  
Warner and Co. (Inglavin)  
Zimmermann

**PHOTOGRAPHIC**

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Perken, Son and Raymeut

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Sponz

**PILL MACHINES**

Cocking, T. S.



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FANCY SOAPS.**

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Briedenhach and Co.  
Cheesbrough Manufacturing Co.  
Crown Perfumery Co.  
De Pass and Co. (Beach Blossom)  
Durrant, Geo.  
Ewen (Soaps)  
Grossmith, J., Son and Co.  
Hirst, Brooke and Hirst  
Munn, C. A.  
Maw, Son and Thomson  
Mauvert (Soaps, &c.)  
Newbery  
Raines and Co. (Cachous)  
Rimmel, E. (Specialities)  
Rowland and Son (Various)  
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Sanger and Sons  
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Warwick Brothers  
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Robbins

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Corbyn, Stacey (New Preps.)  
Duncan, Flockhart  
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Fletcher (Liqs. for Syrups)  
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Hewlett and Sons  
Hirst, Brooke and Hirst  
Hooper, E., and Co.  
Howards and Sons  
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Martindale (Nitroglycerine)  
Oldfield, Pattinson and Co.  
Savory and Moore  
Sellers, J.  
Southall Bros.  
Squire (Chemical Food, &c.)  
Synnes and Co.  
Thompson, H. A., and Son  
Walker, Troke  
Wink, J. A., and Co.  
Woolley, Sons  
Wyleys (Various)

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Beecham, Thomas  
Hooper, Dr.  
McKesson and Robbins (Ovoid-capsuled)  
Morrison  
Newbery  
Robertson, J. (Machine)  
Ranger, J. and Sons  
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Smith, W. F.  
Towle (for Females)  
Warner, W. R. (Coated)  
Wyleys and Co.

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Hewlett and Son  
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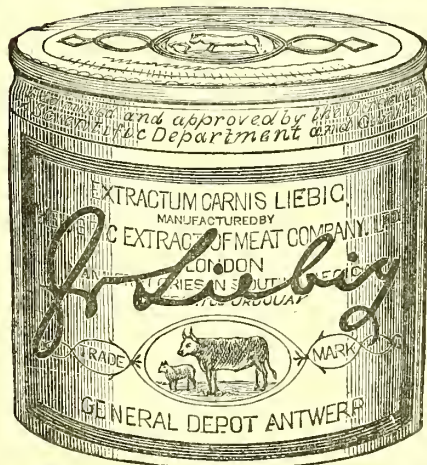
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We beg to direct special attention to **FOSSILINE**, of which we are the Sole Manufacturers, and which we can supply in any quantity. It is one of the cheapest **HYDRO-CARBON JELLIES** in the market, and equal in quality to any. We have latterly perfected the quality, the **CONSISTENCE** and **TEXTURE** being **MUCH IMPROVED**.

It answers all the Tests for Paraffinum Molle, B.Ph. (1885).

It is put up in Tins of 1 lb., 7 lb., 14 lb., and 28 lb., Tins Free. **YELLOW**, 8d. per lb., to account; **WHITE**, 1s. 4d. per lb., to account. 56 lb. and 112 lb. Drums, 1d. per lb. less; Drums free.

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**Matthews's**  
Used in the Royal Nurseries, and highly recommended by the Faculty; it protects the Skin from cold winds, chaps, &c., and preserves the Complexion.  
**Fullers Earth.** 6d. & 1s. Boxes.

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**GENUINE BROWN WINDSOR & HONEY SOAPS**

ARE THE BEST AND MOST ECONOMICAL.

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This Unique Preparation has the extraordinary property of keeping the

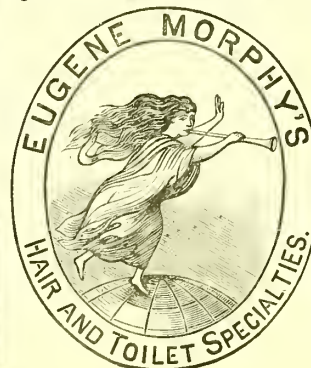
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Easy to Apply.  
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Once Commenced—always Used.

As a simple, effective, pleasant, and nourishing preparation it can be conscientiously recommended to a customer whose hair is becoming grey, red, or white.

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(“BURROUGHS”).

A HIGHLY CONCENTRATED, STIMULATING, STRENGTHENING FOOD.

This admirable restorative, which is a solution of fresh beef-juice (including peptone) and iron citrate in a pure medicinal wine, was suggested by the distinguished Dr. Parkes. The iron is dissolved in the purest of wines, and the beef-juice is added subsequently.

This nutrient, restorative and stimulant is a powerful blood tonic, and a food that has been the means of saving many lives in low states of the systems, as in typhoid fever and pneumonia, etc. It is invaluable in anæmia; and to Europeans in hot or malarial districts it is of the greatest service. The flavour is acceptable to the most delicate, and is specially liked by children. The preparation does not injure the teeth, constipate, or in any way disagree, and is free from all objections; while the same aliments as it contains, if given separately, would in many cases cause untoward symptoms and be badly tolerated. The tonic and stimulant properties of this food are made substantial and permanent, being reinforced by the presence of beef.

“Children take it readily (as well as adults), and in many cases of *scrofula* and *ricketts* we have given it with the most gratifying results,” writes a high authority. “We have given it,” says another, “to patients who have been quite unable to use the regular preparations of tonics and nutrient material, and in no instance have we found any objection raised against its employment as a medicine.” Its value as a tonic is very great. Each fluid ounce of this preparation contains the nutritive value of two ounces of beef with four grains of citrate of iron.

The LANCET Analytical Report:—“This is a really valuable preparation, and, as far as we know, a novelty. It contains beef-juice and citrate of iron in solution in wine, and is therefore a very powerful and rapidly acting tonic. Children, as well as adults, take it easily; and, as its taste is by no means unpleasant, it can hardly fail to attain great popularity.”

The BRITISH MEDICAL JOURNAL reports:—“A useful preparation of Beef and Iron Wine, which, we believe, is coming rapidly into favour. Some of our most eminent physicians who have given it a trial speak of its efficiency, both in acute and chronic cases, in very high terms. It is a concentrated preparation, and bears a large dilution with water, and in this condition is readily taken by delicate persons and children unable to assimilate the usual tonics and nutrients.”

The MEDICAL PRESS & CIRCULAR reports:—“This preparation is an admirable combination of Beef and Iron, and is palatable enough to be borne and even liked by those of most fastidious taste. We have given it to patients who have been quite unable to use the regular preparations of tonics and nutrient material, and in no instance have we found any objection raised against its employment as a medicine.”

The MEDICAL TIMES & GAZETTE reports:—“This preparation is, we think, an entirely new form of medicinal food. It consists essentially of beef-juice and citrate of iron dissolved in wine, and to these are added orange, colombo and gentian, and it is consequently decidedly tonic, stimulant and restorative. It is clear, bright, and pleasant in appearance, and is very palatable, so that children as well as adults will take it readily.”

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[1]

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ESTABLISHED 1859.

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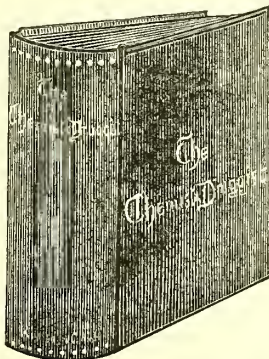
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ADVERTISEMENTS of employers and assistants can now be received by us up to the first post on Friday mornings, and will be inserted in the current week's issue.

CORRESPONDENTS will please note that our registered telegraphic address is changed from "Chemdrug, London," to "Chemicus, London," the Post-office authorities having informed us that they found the former word inconvenient.

READING CASES.—Please note: We cannot continue to deliver these to City houses for enclosure. We find so many of the wholesale firms careless about enclosures, and this leads to so much troublesome correspondence and double work, that we have decided to supply these reading cases only to purchasers in the office at 1s., or by parcels post at 1s. 3d. We append a sketch of the reading case which we are now supplying. It is in black cloth with gilt letters. In it a quarter's copies of THE CHEMIST AND DRUGGIST can be conveniently kept.



THE CHEMISTS' AND DRUGGISTS' DIARY for 1887 has been in extraordinary demand, and our stock is now exhausted. We cannot now supply extra copies. We have to acknowledge with thanks the complimentary expressions which it has called forth from a large number of subscribers.

SACCHARIN.—In German commercial circles it is evidently thought that this new sweetener has a promising future. Extensive works for its manufacture are now in course of erection near Magdeburg, and the council of the German Association of Sugar Manufacturers has resolved to petition the German Government for a tax on glucose and maltose, to counteract the falling-off in the yield of the tax on sugar which is expected to result from the introduction of saccharin.

A REMARKABLE CASE has been tried in the High Court of Justice during the week. A customer sent to a chemist at North Woolwich for a pennyworth of confection of senna, and it is alleged that extract of belladonna was supplied in error. For the consequences, 500*l.* damages are claimed. The Chemists and Druggists' Trade Association have taken up the defence, so it must be understood that our report as at present printed only indicates one side. As it is essential to us that we should prepare this journal for posting in time for Friday's Eastern and Australian mails, it is impossible for us to include a report of the second day's proceedings, which will, however, be given fully next week.

THE SHOP HOURS REGULATION BILL.—Up to Thursday morning last we had received 1,909 voting-papers. Of these 1,137 polled for the Bill, 624 were against it, and 148 declared themselves neutral. Several correspondents have written expressing their surprise that a larger proportion of subscribers have not responded. We are not ourselves at all surprised. It is the way of the world. If 20 per cent. of our readers have sent us back their voting-papers we may reckon that of the rest at least 20 per cent. intended to do so but are still neglecting the task. Another 20 per cent. may be assumed to have said, "We will not." A fourth similar section are indifferent whether the Bill passes or not, and the remainder, we may presume, objected to mutilate their journals by removing the leaf containing the voting-paper. To such we may explain again that the Post Office required us to send out the papers as part of the journal. The pages will not be indexed, and can be removed without interfering with the volume. Subscribers are again reminded that their votes will be welcome. The papers will be found on page 677, November 20. Unless the opponents make a strong effort this week they will have to submit to the assumption that they are in a hopeless minority.

## DIARY FOR NEXT WEEK.

Monday, December 13.

Society of Arts, Cantor Lecture.

Wednesday, December 15.

Society of Arts (ordinary meeting), at 8 P.M. Mr. J. B. Marsh on "Cameo Carving as an Occupation."

Chemists' Assistants' Association, 103 Great Russell Street, W.C. Mr. T. A. Ellwood on "The Official Fixed Oils."

Thursday, December 16.

Chemical Society, at 8 P.M. Papers: "Researches on the Constitution of 'Azo and Diazo Derivatives.' I. Diazomido Compounds," by R. Meldola, F.R.S., and F. W. Streatfield. "The Influence of Silicon on the Properties of Iron and Steel," by Thomas Turner.

Linnean Society of London, Burlington House, W., meeting at 8 P.M.—Papers:—I. "On Apospory and Allied Phenomena," by Professor F. O. Bower. On "A new instance of Apospory in *Polytrichum angulare*," by C. T. Drury. II. "Experiments on the Sense of Smell in Dogs," by Dr. G. J. Romanes.

Saturday, December 18.

Football Match, P.F.C. v. Old Grammarians, Primrose Hill, 3.30 P.M.



## Metropolitan Reports.

**ART AT THE HOMOEOPATHIC HOSPITAL.**—A fine art distribution, in aid of the fund to be devoted to opening the Bayes Ward in this institution, is to take place this month. During the last two or three weeks the various paintings, drawings, etchings, engravings, photographs, and miscellaneous works of art which constitute the prizes have been on view. Pictures have been presented by Sir J. D. Linton, Mr. Ernest Paston, Mrs. Alma Tadema, Mr. Tristram Ellis, and many others.

**THE PAD TREATMENT.**—On Saturday last Dr. Danford Thomas held an inquest on the body of Alfred Thomas Lefevre, a jeweller, of Wells Street, Hackney. The widow's evidence showed that her husband had been in general bad health for some time, principally complaining of his side and back. Upon the persuasion of a friend he read the advertisements relating to a patent pad, which was to be worn round the body, and was warranted to cure almost any ailment. He therefore got one, and had such great faith in it that he would not have a doctor, nor let the wife call one in, although she desired to do so. At last he got so bad that she called in Dr. Trupp, who found him suffering undoubtedly from consumption of the bowels, which might have been delayed with medical aid, but he died suddenly of that complaint. A verdict in accordance with the medical evidence was returned. The widow complained that she paid seven guineas for the pad, and that from the advertisement she supposed that a staff of physicians were kept on the premises by the proprietor.

## Provincial Reports.

*Items of news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.*

### BIRMINGHAM.

**FIRE.**—On Friday evening, November 3, a fire occurred on the premises of Mr. F. T. Gibson, chemist, 93 Gooch Street, caused by the boiling over of some polishing paste in the course of manufacture.

### BLANDFORD.

**CORNS AND PEPPERCORNS.**—Mr. R. H. Groves, pharmaceutical chemist, Blandford, has adopted a scheme for pushing his corn solvent which is a new form of a device invented first, we believe, by some Glasgow grocers. He announces that every person purchasing a bottle of chlorophyll corn paint will have a chance of earning the sum of 1,666*l.* 13*s.* 4*d.* in the event of there being one hundred thousand purchasers, or less in proportion, according to the number of subscribers. The outline of the competition is that a common half-pint soda-water bottle (correct measure) has been filled with peppercorns taken from a sack containing an unknown quantity in the presence of J. W. Luff, Esq., Mayor of Blandford, and sealed by him. With every bottle of the corn paint is enclosed a certificate, and each purchaser will have a chance of guessing the correct number contained in the bottle. In the event of two or more guessing the same number, such number being the correct or nearest to the correct number, the prize-money will be evenly divided. The competition is to close on February 3, when the bottle will be opened and the peppercorns counted.

### CHESTER.

**DR. WATERS AND THE CHEMISTS OF CHESTER.**—The British Medical Association having presented their gold medal to Dr. Waters, of Chester, "for his long-continued, self-denying, and able services in the cause of medical reform," the inhabitants of Chester have collected 700*l.* to present

the doctor with his portrait, and the following amiable correspondence has lately passed between the chemists of Chester and Dr. Waters:—

"We, the chemists of Chester, desire most sincerely to congratulate you upon your well-deserved honours recently bestowed, to which your long and eminent services to the profession and the public have so justly entitled you. We trust that it may long please Providence to spare your valuable life to enjoy the high position to which you have attained, as well as to minister to the numerous friends who seek relief from your skilful treatment. We wish to convey to you our deep sense of the uniform courtesy and kindness we have always received when we have had occasion to confer with you, and shall ever remember your readiness to afford all the assistance in your power.

"To Dr. Waters." Signed by the chemists of Chester.

[Dr. Waters's Reply.]

"Nicholas Street, November 23, 1886.

"GENTLEMEN,—The great work of my life has been, in the first place, to aim at the elevation of my profession by raising the standard of the education, and, next, to protect the public from the hitherto tolerated existence of partially educated practitioners by making the examination of all members of the profession, in the future, compulsory in medicine, surgery, and midwifery before admission to the 'Medical Register.' The interest of the public, for which all professions exist, demands that every member should have his ability and attainments tested under the supervision of an independent as well as competent tribunal, and to that end the composition of the Medical Council has been modified by the addition of direct representatives of the profession, having no corporate interests to serve and no object in allowing lax examinations. The Medical Act of 1836 secures both these points.

"As far as the registered medical practitioner is concerned, the welfare of the public is henceforth insured. But there is another body of men—the Pharmaceutical Chemists—without whose intelligent and skilled aid the best efforts of the medical man would be in vain.

"During my long residence in Chester, my relations with you have been of the most intimate character, and have taught me both to value and esteem your services, and I have always maintained that no locality could boast of a more reliable class of men. Under these circumstances the address of congratulation with which you have favoured me is especially gratifying, and I receive it with most sincere thanks in the kindly spirit in which it is offered.

"Believe me to remain, gentlemen,

"Your obliged and faithful,

"The Chemists of Chester."

"EDWARD WATERS.

### DROITWICH.

**FIRE.**—Early on Sunday morning, November 28, Mr. Stephen Harris, chemist, High Street, was awakened by a strong smell of fire, which he discovered proceeded from a store at the rear of his premises. The fire brigade were quickly in attendance, and with plenty of willing helpers the fire was soon got under, but not until a great deal of damage had been done by water.

### DUDLEY.

**CHLORAL-POISONING.**—On Saturday last the Borough Coroner (Mr. E. Percy Jobson) held an inquest respecting the death of Thomas Henry Smart, aged 31, accountant, who had been found dead in bed. The jury having been sworn, the coroner stated that Dr. Higgs, whom he had directed to make a post-mortem examination of the body, had been prevented doing so by the family of deceased. A solicitor had advised the family that the examination should be made in the presence of other medical gentlemen. This was ultimately done, half-an-hour's delay being thereby caused. George Smart, brother of the deceased, stated that deceased had recently complained of being worn out, through pressure of work and having sleepless nights. Deceased informed him that he had taken chloral hydrate to induce sleep. Witness apologised to the Court for delaying the post-mortem. Corroborative evidence was given by a sister-in-law of deceased. John Vincent Webster, chemist's assistant, said that on Monday night Mr. Smart called on him to purchase chloral



hydrate, in order to obtain rest. He stated that he had taken doses of 30 grains before, and had been recommended to do so by a medical man. Witness said 30 grains was a large dose, and it would be safer to take a smaller one. The customer again repeated that he had taken the quantity before, and then witness let him have what was in the shop—about 1½ oz. The Coroner: How much would there be in that? Witness: 720 grains. (Sensation.) The Coroner: You told him 30 grains was a proper dose, and you gave him 720? Witness explained that the purchaser seemed so conversant with the drug that he let him have it without suspicion. He put his name on the label, and the name of the drug. Mr. M. S. Allen, M.R.C.S., stated that he saw deceased two hours after death. He knew that he had been in the habit of taking medicine to produce sleep in much larger doses than was good for him. Dr. T. F. Higgs described the post-mortem, made in the presence of Mr. Allen and Mr. Goulder. There was a strong smell of chloral in the stomach and intestines, and the brain was bloodless. It was his opinion that death was caused by syncope, produced by chloral. Mr. F. S. Goulder, L.R.C.P., gave similar evidence, and the jury returned a verdict in accordance therewith.

#### EXETER.

**A PARISH DOCTOR'S SUICIDE.**—A very sad case of suicide took place at Dunsford, near Exeter, on December 3. The deceased, Dr. Riddell, has for some years been in practice in the neighbourhood and held several poor-law appointments. Differences arose between him and his neighbours, and complaints were made by some of the people that they did not get the attention they were entitled to from the parish doctor. More than one inquiry had taken place without any serious result following, but a few weeks since another complaint was made, and the Local Government decided to call upon him to resign. The decision was communicated to the guardians yesterday, and the doctor received the letter at breakfast. He went into the library, wrote some letters, and then proceeded upstairs, where his wife found him a few minutes after dying from the effects of poisoning by strychnine. Dr. Riddell left behind him a letter showing that he intended committing suicide, and at the same time expressed a belief that he had been persecuted because of a difference between himself and another resident in the parish over family affairs.

#### GATESHEAD.

**UNREGISTERED VITRIOL WORKS.**—At the Gateshead County Court, on Tuesday, before Judge Holl, an action was brought against Messrs. Pattinson, Pearl, Hardeining & Co., chemical merchants, Felling, by Mr. Alfred Evans Fletcher, chief inspector of the Local Government Board, to recover the sum of 25*l.*, a nominal penalty for carrying on sulphuric acid works without being registered under the Act, by which they were rendered liable to a penalty of 5*l.* per day. The facts were not disputed; but it was held that the defendants acted through ignorance or inadvertence; and his Honour, taking that view, gave judgment for 10*l.*, with costs on the lowest scale.

#### GLOUCESTER.]

**A CORONER ON PRESCRIBING CHEMISTS.**—Last Saturday Mr. Morton-York, City Coroner, held an inquest regarding the circumstances of the death of the wife of George Jones, a corn porter. From the evidence of deceased's husband and a midwife, it appeared that deceased recently gave birth to a child, and was progressing favourably. The night before her death she took a draught which had been got from Mr. Hughes, chemist. Dr. Peacock, who made the post-mortem examination, stated that he found the heart to be very weak owing to the thinness of the walls. The lungs were also affected. The Coroner, in the course of his summing up, said that deceased took a draught which was prescribed by Mr. Hughes, a chemist, and he was quite sure Mr. Hughes only did what was a very kind action. But no doubt Mr. Hughes was aware that there was such a statute as the Apothecaries Act in existence, a certain section of which provided that no one but a registered apothecary was able to advise or to prescribe for anybody under a penalty of 20*l.*,

and that an action might be brought by anybody who might choose to be an informer. He knew that it was the custom of chemists generally in Gloucester and other places to do this sort of thing, although he wished it to go forth that he was not referring to any chemist in particular. Mr. Hughes had acted very straightforwardly, and had sent him a copy of the prescription. It was the especial privilege of medical men to prescribe, and for the chemist to compound that prescription. A medical man possessed certain qualifications to prescribe for people, and if it should so happen that a chemist prescribed in such a way as to cause a person's death, what was the position of that chemist? An unenviable one. He should have to do his duty, and commit him for manslaughter. He did not say that that had anything to do with the present case, and he would not express any personal opinion about the propriety of the Act. The Act was the law of the land, and until it was repealed that law must be observed. He considered it his duty as coroner to call attention to the matter, and he did it, not invidiously against Mr. Hughes or against any other chemist, but to point the law out for their advice. Mr. Hughes was perfectly absolved from any blame in the present matter: he was only doing a very kindly action, and he (the speaker) would acquit him of any improper intention of guilt. It was the province of medical men, and medical men only, to prescribe for the ailing. The Coroner then called the attention of the jury to the medical evidence, and they returned a verdict in accordance therewith.

#### MANCHESTER.

**OWENS COLLEGE.—SIR H. ROSCOE'S SUCCESSOR.**—Mr. Harold B. Dixon, M.A., F.R.S., Fellow of Balliol College, Oxford, has been appointed Professor of Chemistry and Director of the Chemical Laboratories, in succession to Sir H. E. Roscoe, M.P. The new professor is a very distinguished chemist, and one of the foremost fellows of the Chemical Society. The subjects to which he has paid special attention relate to the constitution and physics of gases, upon which he has presented numerous papers to the Chemical and Royal Societies, and has been specially recognised by the latter for his excellent work. Mr. Dixon is a fluent and humorous speaker. He should make a worthy successor to Sir Henry Roscoe.

#### NOTTINGHAM.

**THE NOTTINGHAM AND NOTTS CHEMISTS' ASSOCIATION.**—The annual dinner took place on December 1, at the "George" Hotel. Councillor Fitzhugh, J.P. (president), occupied the chair, and Mr. C. A. Bolton the vice-chair. Nearly sixty members and friends sat down to dinner, among those present being Professor Blake, of the University College, Councillor Lees, Dr. Clements, and Messrs. J. H. Haywood, W. H. Parker, A. Beilby, R. H. Beverley, S. V. Holgate, T. Fletcher, A. Smith, J. Wilford, W. Widdowson, R. Widdowson, W. J. Rogerson (Hearon, Squire & Co., London), W. Hodgkinson (Hodgkinson, Stead & Treacher, London), W. H. des Forges (Sissons Bros. & Co., Hull), H. Webster (Harker, Stagg & Moss, London), Cobb (Burgoyne & Co., London), Walbran (Lofthouse & Saltmer, Hull), Cholerton (Hirst, Brooke & Hirst, Leeds), F. Gill, and A. Middleton, hon. secretary. After the usual loyal toasts had been disposed of the Chairman proposed "The Pharmaceutical Society," and Mr. W. H. Parker suitably replied. Professor Blake proposed "Success to the Nottingham and Notts Chemists' Association," remarking that, while it was evident that it provided its members with bodily sustenance, it also took pains to provide the associates with mental sustenance of the best kind. Mr. Fitzhugh, in responding, said it was eighteen years ago that day since the society first started; and, as he had been connected with it the whole of that time, he was very proud to see round that table members who had formerly been associates, and who would acknowledge with thankfulness the great services the association had rendered to them. He did not remember a more successful gathering. They now numbered forty-eight members and forty-five associates. Mr. C. A. Bolton proposed "The Professors of the College," and Professor Blake (who is conducting the botany classes this session) replied. Mr. J. H. Haywood gave "The Town and Trade of Nottingham," to which Councillor Lees replied.



Mr. Beilby gave "The Visitors," which was responded to by Messrs. Cobb and Walbran. Mr. des Forges next proposed "The Officers of the Association," which toast was acknowledged by the Treasurer (Mr. W. H. Parker) and the Hon. Sec. (Mr. A. Middleton). Mr. H. Simpkins proposed "The Ladies," to which Messrs. Cholerton and A. Gill replied, and the last toast was that of "The Chairman." A selection of songs was rendered at intervals by Messrs. Davies, Richardson, Gascoigne, and Pinder.

#### OLDHAM.

**CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.**—At the meeting held on Thursday evening, December 2, Mr. Albert Smith read a paper entitled "A Synopsis of Organic Chemistry." Mr. Smith reviewed the production of such compounds as artificial oil of mustard (sulphocyanide of allyl), benzoic, salicylic, tartaric, and other acids previously supposed to be of true organic origin only. The paper was listened to with much attention.

#### PLYMOUTH.

**AN INGENIOUS APPRENTICE.**—On December 2, Mr. W. S. Hearder, D.Sc., F.L.S., medical galvanist and general mechanician, Union Street, Plymouth, asked the magistrates to order an apprentice of his, named Broadley, to perform his duties. Mr. Stanbury, who appeared for the complainant, stated that defendant had refused to work the lime-light at the theatre. There was a special clause in his indenture that he should work at night time if required, but Broadley had been ingenious enough to fall back upon another provision to the effect that he should not frequent playhouses. Mr. Stanbury submitted that as the defendant was not required to go before the scenes that excuse would not hold good. After Mr. Hearder had given evidence, the defendant promised to obey the lawful commands of his master in the future. The case was adjourned for a month to see that he performed his duty.

**THE NIGHT BELL SERVICE.**—Mr. Barge must like night work better than do most chemists. The telephone company announce by advertisement in the Plymouth papers that they have established a direct all-night connection between their call-room at Mr. Barge's pharmacy, 10 Belgrave Terrace, Mutley Plain, and the central police and fire station. In cases of fire or other urgency, this may be used by the public free of charge, on application to Mr. Barge, by means of his night bell.

#### SHEFFIELD.

**SHEFFIELD PHARMACEUTICAL AND CHEMICAL SOCIETY.**—The monthly meeting of this society was held at the Lecture Room, Norfolk Row, on Wednesday evening, when a paper was read by Mr. G. A. Grierson on "Pepsine and Commercial Pepsines." A discussion followed, which was taken part in by Messrs. Furness, Bradwell, and others, and a hearty vote of thanks to Mr. Grierson was passed. The chair was occupied by the president, Mr. Newsholme.

#### TORQUAY.

**CHEMISTS' ASSISTANTS' ASSOCIATION.**—The assistants and apprentices of the pharmacists of Torquay have recently formed an association for the promotion of social intercourse and the advancement of pharmaceutical education. Mr. E. Smith, F.C.S., has accepted the office of president, Mr. Bathe is vice-president, and Messrs. W. Smith and F. March secretaries. The opening meeting was held at the Temperance Hotel on Wednesday, December 1, when the president delivered an inaugural address. After referring to the advantages to be derived, by principals and assistants alike, from mutual intercourse and exchange of ideas, he proceeded to speak of the past, present, and probable future of pharmacy, giving some interesting details of his own apprenticeship. He was followed by Mr. Guyer, F.C.S., who spoke of the necessity of such associations, and of earnest, individual, self-denying work, if the pharmacists of the present day were to keep abreast of rapidly advancing science. During the evening prizes were offered by the president, and by Messrs.

Guyer, Riches, and Shapley, for the best papers on "Pill-making and Pill-coating," "The Botany of the Pharmacopœia," and "The Proposed Curriculum." Votes of thanks to these gentlemen, and to the president for his address, closed the business part of the proceedings, and the remainder of the evening was given over to refreshments and musical entertainment. Songs were effectively rendered by Messrs. Milne, Parkyn, and March. At the next meeting, on Tuesday, December 14, papers will be read by Mr. W. Smith on "Cinchona Barks," and by Mr. Morris on "Vinum Ipecacuanhæ."

#### WIDNES.

**DESTRUCTIVE FIRE AT CHEMICAL WORKS.**—On Sunday last, about six o'clock in the morning, a fire broke out at the chemical works of Messrs. Matheson & Co., in a building recently erected for the purpose of working a German patent for the manufacture of soda and glycerine. The plant was very valuable. The greater part of the new building was gutted, but the fire was prevented from spreading to the rest of the works. The damage is estimated at about 10,000*l*.

#### WOLVERHAMPTON.

**DEATH OF A WELL-KNOWN VETERINARY SURGEON.**—Mr. H. J. Cartwright, one of the oldest and best known veterinary surgeons in the Midland Counties, died on December 2 at his residence, Wolverhampton, after a short illness, having caught a severe cold in the hunting field. Deceased had a most extensive practice amongst the nobility and gentry in Staffordshire, Shropshire, and Worcestershire. He was also well known in the sporting world, being professionally employed by the Earl of Bradford and other noble owners of racing studs, who placed great reliance in his skill and judgment.

#### SCOTLAND.

##### AYR.

A NEW SHOP will be opened in Ayr this week by Mr. Jackson, Maybole.

##### BROXBURN.

**A PETROLEUM OIL SPRING.**—During the operations connected with the sinking of a pit on the property of the Broxburn Oil Company brine and petroleum were met with oozing up at different parts. The flow of oil, while moderate, has continued steadily and constantly, and a number of gallons have been recovered and removed to the laboratory for treatment. The results there obtained are regarded as highly satisfactory. The petroleum is described as of a very superior quality, having a specific gravity of 830, setting-point of 61° Fahr., colour green, and flash-point 159° Fabr. Complete analyses have not yet been undertaken, but one distillation alone gives some fractions nearly water-white, and a treatment with sulphuric acid and soda gives very little loss. The superiority of the native article will be understood when it is mentioned that some crude oils regularly treated in the same way give fully 19 per cent. of loss. No idea can yet be formed of the extent of the deposit, but measures will be taken to test the matter, and as the operations at present in hand necessitate going deeper, the belief is entertained that the flow will be greater from the increased pressure. This is the first time, we believe, that petroleum has been obtained in Scotland in its native state in such quantity.

##### DUNOON.

**FIRE.**—Early on Thursday morning, December 2, a fire broke out in a grocer's shop in Pier Road, Dunoon. The flames rapidly spread to a dwelling-house above belonging to Mr. George Stirling, druggist, and both shop and house were gutted. The shop occupied by Mr. Stirling was also considerably damaged, but the bulk of the stock was saved. Mr. Stirling's loss is wholly covered by insurance. The total damage is estimated at 3,000*l*.

##### GLASGOW.

A FIRST and final dividend on the trust estate of Mr. W. F. Hyne, chemist, Gairbraid, will be paid this week by Messrs. Wilson & Stirling, accountants.



## Pharmaceutical Society of Great Britain.

## EVENING MEETING.

THE third meeting of the session was held on Wednesday evening, there being a fair audience, including about a score of visitors and several country members, and as it ultimately proved the programme was exceptionally interesting. Surgeon-Major Aitchison, who accompanied the Afghanistan delimitation commission as naturalist, came to tell the members of his experience in the region of the Hari Rud Valley, which lies between the north-east of Afghanistan and the north-west of Persia. It is very seldom that a man of science has the opportunity of exploring that region; very few, if any, have done it before Dr. Aitchison, and he has done it so well—both botanically and zoologically—that few are likely to follow in his footsteps, unless to see with their own eyes the wonders which he speaks about. In his “Notes on some plants and plant products of Afghanistan,” Dr. Aitchison settles many moot points which have been attached to the umbelliferous gum-resins since they were introduced into European medicine; he has brought home with him a most excellent collection of herbarium specimens, representing fully 800 species, all of them most complete in every part, and greatly enhanced in their value from the fact that his observations on the spot have added much to our knowledge of the life-history of the plants. With the aid of a large map, Dr. Aitchison described the ground he went over, pointing out the regions where the more important plants—asafetida, ammoniacum, and galbanum—were particularly abundant, and he was very happy occasionally in his by-remarks upon the tendency of the natives to mislead the investigator. For example, he was assured that asafetida was obtained only from the female plant—“The only one which yields milk, you know.” Another native tried to assure him that the plant was not the asafetida-yielding one by eating slice after slice of the root, apparently with great gusto. “You see,” said the native, “it is not the asafetida plant.” “Bah!” said another, “you’ll now stink like a camel for a month.” These are fair examples of the difficulties which the investigator has to meet, but, as far as we could judge, Dr. Aitchison took the natives’ statements for what they were worth. His description of the growth of the plants mentioned was very graphic, and it created no little astonishment in the audience when he showed an asafetida stem about six inches in diameter, and explained that one month he had seen the plain upon which it grew arid and desolate, and in three months it was thick with verdure, the *Dorema ammoniacum* and *Ferula fatida* having grown to shrub-like size in that short period, and given character to the plain by their foliage and beautiful inflorescence. A month later the barren aspect could be seen again. The mystery as to the origin of galbanum he satisfactorily solved with his specimens of the gum-resin and of the plant itself, and Mr. E. G. Baker’s proximate analysis of the gum-resin would appear to establish with certainty that it is the true galbanum. The specimen was exceptionally fine, the tears were distinct, pale-coloured, and generally more like ammoniacum, but the existence of umbelliferone in the resin was a conclusive proof of its identity. It is true that the indications of the presence of umbelliferone were somewhat remote and not so marked as with old specimens; but we yet require some work on this gum, particularly in the direction of ascertaining if umbelliferone is present in recent samples to the same extent as in old ones. In the discussion which followed the botanists had it all to

themselves, and it would certainly have been a very dreary affair had not the subjects under discussion long been enveloped in mystery. Mr. Baker, sen., in a very characteristic speech, referred to the value of Dr. Aitchison’s work, and gave a very interesting account of the identification that afternoon of the source of royal salep, which Daniel Hanbury in 1856 recognised as different from common salep, derived from orchis species. Hanbury could never get to the bottom of this matter, but now it may be said with certainty that Mr. Baker, in conjunction with Mr. Helmsley, has proved that it is derived from an amaryllidaceous plant of which he showed a fresh specimen. This was the most interesting point brought out in the discussion; none of the speakers had ever been where Dr. Aitchison made his collection, so that they could not criticise, and therefore the speakers had to be content with the facts as stated, and they warmly expressed their thanks to Dr. Aitchison and their admiration of his work.

The President took the chair a few minutes past 8, and the minutes of last meeting being taken as read, he called upon Dr. Aitchison to read his

NOTES ON SOME PLANTS AND PLANT-PRODUCTS OF  
AFGHANISTAN.

After Dr. Aitchison had briefly referred to his appointment as naturalist to the commission and the work of the body, he described the route by which the company marched to the region where his investigations were chiefly made. That region was situated north and south between Herat and Panjdeh, to the west towards Persia, including the north-east corners of it, and to the east, including the north-west corner of Afghanistan. His attention was confined to plants which yield products of commercial value, and his work in this direction consisted of collecting botanical specimens as complete as possible, and at various stages of growth, also the ripe seeds for distribution to botanic gardens, such as Kew. He also endeavoured to obtain information as to local names and uses, but his difficulty in many cases was that there was no population from whom he could get that information. Umbelliferous plants are the characteristic type of the vegetation which abounds in the region. This may be on account of the peculiar situation of the plains, which are from 2,000 to 4,000 feet above the sea level. There is no surface water, and none can be got without digging to an enormous depth, yet, strange to say, plants grow on the soil in abundance during a few months of the year. He graphically described a plain covered with this vegetation, of which the *Ferula fatida*, *Dorema ammoniacum*, and *Ferula galbaniflua* were the principal individuals. The first two invariably grow together. From the time that the plants begin to grow the plains are one mass of green, then the stems begin to shoot up, and lastly a dreamland aspect is imparted to the scene on the appearance of the beautiful inflorescence. All this lasts from the end of April to the beginning of July, when it disappears as suddenly as it began.

*Ferula Fatida*.—Dr. Aitchison described this plant as an excellent one in fruit, and referred in detail to its growth. Regarding the collection of the gum-resin, he explained that the natives stated that the plant does not yield asafetida, but, he humorously observed, they have a faculty for telling travellers things which are very different from what can be seen by careful observation. The collectors come to the plains supplied with sufficient provisions to last them for several weeks. They lay bare the root stock before the flowering stage has been reached, and cut off a portion of the stem, from which a milky juice exudes. Next the root is covered with a dome-like structure of earth and leaves, with an opening towards the north, so that the sun may not hinder the exudation. In five or six weeks they return, and by this time a thick gummy, reddish substance, resembling the asafetida of commerce, has appeared on the root. This is scraped off and placed in a leather bag. The roots may yield a second supply, but not so abundantly as the first. The asafetida is then sent to Herat, where it undergoes adulteration to fit it for commerce! red clay being an important factor in this subsidiary industry. Dr. Aitchison stated that he had found another species of asafetida-yielding



ferula in a different part of the country (Beloochistan), which was distinct from the true *Ferula fatida*.

*Dorema Ammoniacum*.—This grows along with, and as abundantly as, *Ferula fatida*, and in the young state it is scarcely possible to distinguish them, both yielding a juice; but as they grow older the dorema stem begins to show its characteristic feature—large swellings in the side. It is also recognisable from the inflorescence, which is different. When at the fruiting stage the plant is attacked by insects, which puncture the stem, from the wounds a juice flows out, which soon concretes. This is ammoniacum. The author had also observed another ammoniacum plant in abundance, viz., *Dorema glabrum*.

*Ferula Galbaniflua*.—The galbanum plant was described minutely, as no previous description of it is wholly correct. After referring to the amplification which is required upon Bentley and Trimen's description of the plant, he stated that it grows very abundantly in the Gulrae vicinity. In the young stage the stem has a beautiful semi-opalescent appearance, and as it grows older it is vividly marked with rainbow colours. From an early stage of its growth it yields by puncture a milky juice which very slowly concretes. This is galbanum. It has a celery odour, and is very adhesive, so that when removed it generally takes some of the stem with it. This is collected and sent to India, where it is largely used by the natives.

The next plant referred to was described as the sumbul plant, which has been identified as *Ferula suaveolens*. It is new to botanists, and we gathered that it is the source of the sumbul root of commerce. After reference to some other umbelliferous plants of minor importance, Dr. Aitchison proceeded to describe three new kinds of *manna*. The first is from *Cotoneaster acutifolia*, a tall shrub growing on the hills in thickets. As the plant ripens the branches become covered with the exudation, which is removed by simply shaking the branches and collecting the manna in a cloth as it falls. A second kind, grown in the vicinity of Rai Khaf, is also new, and the third is obtained from *Tamarix gallica*, not *T. mannifera*. He obtained another specimen from *Salsola fatida* in fine tear-like masses, but that had been lost.

The next plant of importance which was described was *Glycyrrhiza glabra*. This is largely collected and is converted into black liquorice by the inhabitants of Turkistan. In the preparation whey is used, this imparting to the extract a peculiar piquancy which is not obtainable by water alone. Liquorice is also largely imported into the country from Persia.

Two species of astragalus which yield a tragacanth-like gum were then referred to. This is a peculiar form which exudes spontaneously, and Dr. Aitchison found on cutting a stem that the juice proceeded from the medullary space. It is collected and exported to India, where it is used chiefly for stiffening fabrics. A species of rhubarb known to the natives as "fool's rhubarb" was found near the Barkut mountains. The root of this is used by natives as medicine. Specimens were shown, and it was stated that some seeds of the plant had been sown at Kew, and plants were now growing from them, so that their identification is approaching. Amongst the other plants referred to were *Micarinda spinosa*, the root of which was one of the most nauseous and intolerable smelling substances which he had ever come across. *Astragalus Heratensis*, the source of anzeroot, or sarcocolla, hitherto undetermined, and *Delphinium zetil*, which yields flowers largely used as a yellow dye stuff in India, the source of which has hitherto been unknown.

After Dr. Aitchison concluded reading his paper, he was heartily applauded, and the President called upon Mr. E. G. Baker to read a note on a sample of Afghanistan *Galbanum* collected from *Ferula galbaniflua*.

This being Mr. Baker's first appearance as an original worker, he received a special round of applause. His analysis of the gum-resin brought home by Dr. Aitchison gave the following results from 5 grammes of the powdered material:—

|                                 | Per cent. |
|---------------------------------|-----------|
| Petroleum ether extract .. ..   | 3.108     |
| Ether extract .. ..             | 61.209    |
| Alcohol extract .. ..           | 7.576     |
| Water extract .. ..             | 17.028    |
| Insoluble matter .. ..          | 10.560    |
| Ash .. ..                       | 2.463     |
| Volatile oil and moisture .. .. | 5.332     |

The water soluble matter, chiefly gum, gave a precipitate with ammonium oxalate and lead acetate, but not with borax. The ash was found to contain sodium and calcium as carbonates, and spectroscopic examination gave a faint indication of strontium. The resin gave a dark-brown colour with sulphuric acid, none with hydrochloric acid in the cold, but a dirty red on boiling, without change on the addition of alcohol. The umbelliferone reaction was obtained with ammonia, and sulphur was proved to be absent. On comparing it with museum specimens, he found some points of identity, but there were also points of difference, and on applying Hirschmann's test for Persian galbanum, it did not satisfactorily respond to it, and his remarks appeared to indicate that Hirschmann's tests require revision.

Dr. TRIMEN was then called upon by the President. He commenced by referring in warm terms to the service which Dr. Aitchison had rendered to botanical science by his painstaking and laborious investigations. He was especially pleased that Dr. Aitchison had brought home such a complete set of material, and having himself some years ago worked on umbelliferous plants, he knew how much material for the proper illustration of certain members of the order was required. He then referred to points of difference between some of the plants as brought home by Dr. Aitchison, and the description given of the same in "Medicinal Plants," referring more especially to ammoniacum and galbanum. To a question regarding the frontier of Persia and Afghanistan Dr. Aitchison replied that the same question had been put by the Shah of Persia to one of his ministers, and the reply was, "I refer you to the British." After some remarks regarding the region where the umbelliferous plants grow, Dr. Trimen concluded by again complimenting Dr. Aitchison on his excellent work.

Mr. J. J. BAKER (Kew), the next speaker, made a very acceptable speech. He stated that his Afghanistan work was but a small portion of what had been done by Dr. Aitchison for botanical science, and referred to his notebook of the flora of the Punjab. This was done twenty years ago. During the last Afghan war he had worked up the flora of that country, and now he had thoroughly investigated the region which connects the three great divisions of Asiatic flora. These were the Indian—an extensive and rich flora, comprising about 15,000 different species; the Siberian, also an extensive and most characteristic flora; and the Oriental, which was rich, and contained most peculiar species. All these seemed to be concentrated in the spot explored by Aitchison. He gave the audience a graphic account of the extent of Dr. Aitchison's work, which comprised zoology as well as botany, and then made his statement regarding Royal Salep, which first received attention from Hanbury, thirty years ago, and pointed out then in a paper (reprinted in Science Papers) that the royal salep partook more of the character of a bulb than a tuber. But he could not get at its origin, although he made repeated inquiries. A sample of this royal salep brought home by Aitchison was shown, which presented the characteristic nucleus, or clove, peculiar to tubers. He contrasted this with Hanbury's figure, and showed them to be identical. Lindley had thought that the royal salep was obtained from some species of tulip, but Mr. Baker said it was nothing like it, and only that afternoon he, along with Messrs. Helmsley, Oliver, and Johnston, had been able to refer it to *Unguicaria trisphera*, belonging to the natural order Amaryllidaceae. He showed a fresh specimen of the bulb of this plant, and described it botanically. This discovery removes royal salep entirely from the other saleps, and it would appear that it is more like those which grow in central Africa, and which are used by the Kafirs. The subject is still being worked up by Mr. Johnston, at the Kew laboratories. Messrs. Helmsley, Jackson, Bentley, and Holmes also spoke, but their remarks were mainly complimentary to Dr. Aitchison, and nothing new was added to the knowledge which was conveyed in the papers read. The President then formally put a vote of thanks to Dr. Aitchison and Mr. Baker to the meeting, and it was carried with acclamation.

The next meeting will be held in February.

DEFINITION OF MEDICINE (by a French scoffer):—What is medicine? The art of killing people without offending the police.



## Pharmaceutical Society of Ireland.

ON Wednesday, December 1, the monthly meeting of the Council was held at the Society's rooms, 11 Harcourt Street, Dublin, the PRESIDENT, Mr. William N. Allen, in the chair. The other members of the Council present were the Vice-President, Mr. Draper, Messrs. Hayes, Doran, Wells, Biggs, Grindley, Brunker, Dr. Collins, Professor Tiehborne, Mr. Simpson, and Dr. Montgomery.

### A PERSONAL EXPLANATION.

The PRESIDENT: Gentlemen, before we commence the business the Vice-President wishes to make a personal explanation.

The VICE-PRESIDENT said: It will be remembered that at the meeting of this Council held on September 1 last the report of Dr. Duffey on the July examination was read. That report included the following statement: "That one examiner was allowed, apparently from pecuniary considerations, solely to discharge the duties that three examiners were elected to perform." In the course of the discussion which ensued I said, "It is not a pecuniary question." Some weeks afterwards I received a letter from Dr. Duffey calling my attention to the fact—hitherto quite unknown to me—that my statement was not in accordance with some remarks made by the President at the meeting on April 7th, or with the terms of a letter addressed on the part of the Council at the same meeting to Sir William Kaye. Dr. Duffey further requested that I would "withdraw or justify my statement at the next meeting of the Council." I cannot better explain my position in the matter, and at the same time fulfil my promise to Dr. Duffey, than by quoting from my reply to his letter. I wrote on October 11: "Anything I said concerning your report I then supposed and still believe to have been not only fair but even adulatory comment upon it. But I did not know until now that the question of expense had before arisen. I was absent from Ireland during the whole of April and have never read the report of the meeting of the 7th until to-day. Ignorant of what had passed, I simply, in the sentence to which you object, expressed my own views. At the next Council meeting I will most cheerfully make the explanation you desire." I have only to add that having been again away from home during the interval between the date of this correspondence and the last meeting of the Council, the subject unfortunately escaped my memory, or I should, as I intended, have mentioned it at that meeting. I make this explanation now simply in accordance with Dr. Duffey's request, and in reply to a very long letter from him, in which he seems to have found himself aggrieved. I made a mistake, that is all, and I apologise for it.

### EXAMINATION MATTERS.

Letters were received from Dr. Tweedy, Dr. Whitla, and Mr. Harry C. Draper, thanking the Council for re-electing them as Examiners.

A letter was received from Mr. Alfred H. Bolton, stating that he attended the first day of the October examination, but was prevented by illness from appearing on the two following days; and he now, under the circumstances, asked leave to present himself at the January examination.

The PRESIDENT: I think he should be allowed to come up in January if he pays 10s. 6d., the fee of the Examiner in Chemistry.

Mr. HAYES: How did he get on in chemistry?

The PRESIDENT: He got on very poorly, according to Dr. Duffey's report.

Mr. BRUNKER said he did not think it was necessary to go into particulars of the case. The young man was not thoroughly examined, and was not rejected. If within three months he felt prepared to face the ordeal of an examination again, they should let him in on his paying the fee.

Mr. HAYES moved that Mr. Bolton be accepted as a candidate at the January examinations on his paying a fee of 10s. 6d.

Mr. BRUNKER seconded the motion, which was agreed to.

A letter from Mr. Samuel Kammond, of Weybridge, London, stated that he was at present attending lectures at Woodland's School of Pharmacy, and going through the whole course

of practical chemistry, and asked, would the Council accept these in lieu of lectures at the South Kensington School of Science, which he could not attend.

The PRESIDENT: I do not think we can do anything. There are no other schools that we can add to the number already admissible.

Mr. BRUNKER: This matter will receive some attention from the Council before long. I think our present arrangements as to schools of chemistry require modification, and, under the circumstances, I do not think it is advisable to extend our list until the matter has been fully considered.

The PRESIDENT: We cannot do so without the consent of the Privy Council.

Mr. BRUNKER moved that the Registrar be directed to inform Mr. Kammond that the Council are not disposed to extend the list of chemical schools recognised by the Society at present.

Mr. DORAN seconded the motion, which was agreed to.

### The Government Visitor's Report.

A letter was received from Mr. J. B. Neville, Acting Clerk of the Privy Council, forwarding the following report of Dr. Duffey on the October examinations:—

"May it please your Excellency, I have the honour to report that I attended the examination of the Pharmaceutical Society of Ireland held upon November 4, 6, 7, and 8. For the Preliminary examination eight candidates presented themselves, four of these were rejected, one of the rejected candidates having previously failed to pass the same examination. He scored the same total of marks at each examination. The cause of rejection in each instance was as much due to defective general knowledge as to ignorance of the special subjects, viz., elementary chemistry and elementary botany. This examination was conducted, as heretofore, by one examiner only (*vide* former reports). In the regulations of the Society for the Preliminary examination, the only hook that is laid down as comprising the scope of the 'rudiments of chemistry' the candidate is to be examined in is a most excellent work by a well-known authority and teacher on 'experimental chemistry.' The system pursued in this work is a novel and admirable one. The student is supposed to be trained by the 'experimental method,' viz., by making and studying himself a series of connected experiments. But it is assumed that he should have the necessary assistance of a teacher in making many of these experiments, as well as practical instruction in a laboratory, or elsewhere, in the construction and use of chemical and other apparatus. The great want of such a system of training in those who present themselves for both the Preliminary and Final examinations is most apparent. But the Preliminary examination is not conducted on these lines. Students require to be taught how to learn chemistry practically: they can rarely master the subject unassisted. Until the Society, with this in view, make their Preliminary examination, to a limited extent, practical, as their Final examination to a wider extent should then be, and now is, it would be, I think, desirable to indicate the range of subjects in the examination, as is done now in the case of other examining bodies. I should also recommend for the consideration of the Council of the Society the advisability of including a limited course of chemical physics in the Preliminary examination. At present it would seem intended that the examination should be more purely a theoretical one than the chemical text-book recommended would imply, and that the practical examination, as is now the case, should be reserved for the Final examination. This is a course which, under existing circumstances, seems the best. *Mutatis mutandis*, the remarks I have made above with respect to chemistry apply also to botany. It would be better, I respectfully submit, to define the range of botany that would be examined in than to indicate one particular hook on that science, which, notwithstanding its merits, a student might cram himself up in in a few days before the examination, with the demoralising result of knowing really nothing about the subject. For the examination for the licence there were eight candidates; one of these, who had failed previously, last April, withdrew from the entire examination after doing badly in theoretical chemistry, and six others were rejected. Only one candidate, therefore, out of the eight passed. In addition to the candidates who had failed previously and withdrew from this examination, which should be considered as a rejection, three of the other rejected



candidates had also failed previously. Four of the unsuccessful candidates failed to obtain the total number of marks in the examination in order to pass. Two of the unsuccessful candidates, the cause of whose rejection was the want of four marks, in each case in practical chemistry, out of a passing mark of 20, scored more than was required for a pass on the total marks for chemistry (theoretical and practical combined). They also scored respectively 21 and 5 marks more on the grand totals than the single successful candidate did; and 35 and 19 marks more respectively than the total required to pass. One of these two candidates, which, as I have stated, failed by so few marks in one part of one subject, scored 90 per cent. in botany and materia medica. The successful candidate got a mere pass mark in botany. These facts call again most strongly, in my opinion, to the desirability of the examiners consulting together as to the passing or rejecting of a candidate after a consideration of the merits of each case. According to my reading of the regulations of the Society it is compulsory on the examiners to do so, and to vote, in person, on each candidate (*vide* Order in Council, January 26, 1876, and my report to his Excellency, the Lord Lieutenant, in January, 1886). Although the regulations of the Society as to the number of marks to be obtained in each subject and part thereof in order to pass tell in most cases in the interest of the candidates, it is easy to see that a man whom the other two examiners considered would make a good pharmaceutical chemist might be rejected by one examiner in consequence of a comparatively unimportant mistake in his answering. In such a case—and some such, I think, have arisen—there should be a consideration of a man's answering on the whole examination. It should be remembered that the examination is not a competitive one. The same number of questions are not given orally to each candidate. Judgment should therefore be passed, not by an official adding up a number of marks, arbitrarily used to represent each examiner's opinion of the candidates, but on a review of the whole style and character of his answering, of his general intelligence, and of the extent of what he really does know. Should the present mode of marking in the examination be continued, it is obviously unnecessary that when an examiner has rejected a candidate that candidate should be further examined. Thus on the last occasion two of the three examiners had to examine on two days six candidates who were, as a matter of fact, rejected on the first day. This is hardly fair to either examiner or candidates; on the latter it must in many cases impose a wholly unnecessary pecuniary and mental tax. All the unsuccessful candidates failed in practical chemistry; two, as previously stated, in it alone. The instruction of the average candidate in chemistry is deficient, and there is evidence of too much 'cramming' for examination in it. The present examination of the Society is very properly a searching and strict one. Whether this standard should be kept up, even at the risk of reducing the number of candidates for the title of Pharmaceutical Chemist, rests with the Society. If the Society desires that its Licentiates should be more than mere mechanical compounders and salesmen, and should have a real knowledge of practical and theoretical chemistry—higher even than the examination standard, which at present so many candidates fail to attain, and which, if attained, would probably never be utilised by the average man for the advancement of pharmaceutical knowledge or the credit of the Society—its regulations as to the attendance on a practical course of chemistry in recognised laboratories would seem to need revision. What, however, would be most beneficial to the advancement of pharmacy in Ireland would be the establishment in connection with the Society of a school of pharmacy, in which courses of systematic and practical instruction in the subjects specially required by pharmaceutical students would be given by competent instructors. Such a school exists in connection with the Pharmaceutical Society of Great Britain, and is most successful. Unfortunately, the Pharmaceutical Society of Ireland has not, I believe, funds available for such a purpose, although the subject has been often under consideration and its desirability acknowledged.

"I have, &c.,

"(Signed.) GEORGE F. DUFFEY, M.D."

The PRESIDENT: I think the question of our reply to this had better be taken into consideration at the next meeting of the Council. Gentlemen will then have had an oppor-

tunity of seeing Dr. Duffey's report in print. At the same time I should be glad to hear any observations on the report now.

Professor TICHBORNE said that, to him at any rate, Dr. Duffey's report was particularly interesting. At the last meeting of the Council, when such an extraordinary and violent personal attack was made on him, the reports of the visitor were thrown at his head, as if that gentleman were particularly in love with the examinations. Now, at that time he was not particularly well posted up in the reports of Dr. Duffey; but he had since looked them up, and had found, to his surprise, that hardly one of them was in favour of the mode in which the examinations were conducted. But his last report capped them all; and he was more than ever decidedly in favour of a change in the mode of conducting them. And yet, because he (Professor Tichborne) in a reasonable manner proposed that a committee should be appointed to inquire into them, it seemed that he had fluttered some particular dove-cote in an extraordinary manner, for it ended in a most scurrilous attack being made upon him. Now, however, he was going to put all that behind. Let bygones be bygones. But he would state that, so long as he possessed the suffrages of the members of the Pharmaceutical Society—and he was glad to say that he still possessed their confidence second to none—he would always exercise his rights as a member of the Council whenever he saw anything that he thought needed reform. His criticism of the markings at the examinations, which he thought looked peculiar, was perfect child's play to Dr. Duffey's report; and yet he had been supposed to be in perfect harmony with the existing system. At the same time he quite agreed with the Chairman as to the advisability of postponing the discussion on the report.

Mr. BRUNKER said Dr. Duffey concluded his report by saying there was a by-law of the Society in existence which made it necessary that the examiners should meet. That was not so. The by-law simply stated that "when the examiners did meet, the President or the Vice-President of the Society, or any other member of the Council who was present, should preside thereat." It was therefore rather a straining of the sense of the by-law as originally framed to say that it required the examiners to meet.

Dr. MONTGOMERY said he thought Dr. Duffey's report upset their present system of examining altogether. If they were to be guided by what he said they would have to frame a new system. He was sure that Dr. Duffey in the analysis which he made of their examinations spoke sincerely and had the best interests of the Society at heart. Certainly his observations would require a great deal of consideration. He objected to that body being so scientific in its plan of examination if he (Dr. Montgomery) understood his report rightly.

Mr. BRUNKER: You are quite mistaken.

The VICE-PRESIDENT: Not at all; he wishes that the examinations should be even stricter than they are at present.

Mr. WELLS: He says that if you want scientific pharmacists you must have stricter examinations.

Dr. MONTGOMERY said what struck him in the report was the remark as to the attainment of a standard which, if allowed, would probably never be "utilised." The Council would have to consider whether it was really essential that they should establish a higher standard of chemical knowledge than they had at present, and should give up the plain standard they had hitherto had, and which he thought had answered so well. If they adopted a higher standard they would certainly restrict the number of candidates, and pharmaceutical chemists would say, "*Cui bono?*"

Mr. BRUNKER said the meaning intended to be conveyed was not a condemnation of the standard at which the Council at present aimed, but that the practical education which they were able to obtain at the present moment was not sufficient to enable them to come up to that standard. They should remember that they had to keep up that standard not only as Irish pharmaceutical chemists, but in order that it should be as near as possible to the standard occupied by the British pharmaceutical chemist. What the visitor was speaking of was the opportunities young men had of obtaining practical instruction at the present moment, and he acknowledged the advisability of having a School of Pharmacy.



Professor TICHBORNE said he believed it was contemplated by the Examinations Committee to ask the Council to further appoint them; and he would propose that they should consider Dr. Duffey's report, and report upon it to the meeting of the Council.

The PRESIDENT: That Committee was appointed for another purpose.

Mr. HAYES said that Dr. Duffey's remarks bore upon that purpose, and it would be just as well that the Examinations Committee should take his report into consideration.

The PRESIDENT: It has been stated that Dr. Duffey is "down" on our examinations.

Dr. MONTGOMERY: I would not say "down" on them.

Professor TICHBORNE: Do you refer to my remarks, Mr. President? I did not say that.

The PRESIDENT said Dr. Duffey's statement about the examinations of the Society was, that they were at present very thorough and searching and secret. His report did not find fault with them or with the examiners, but with the amount of knowledge that the candidates displayed. That was what the whole thing was about from beginning to end. He said that they were not prepared, and that the Society ought to have a school of its own.

Mr. BRUNKER suggested that the subject should be allowed to lie over. The Examinations Committee asked to be re-appointed, as they had not finished their work. Dr. Duffey's report should be referred to them.

Professor TICHBORNE moved that Dr. Duffey's report on the October examinations be submitted to the Examinations Improvement Committee in order that they might frame a reply thereto and report to the Council.

Mr. SIMPSON seconded the motion, which was unanimously agreed to.

#### IMPROVING THE EXAMINATIONS.

The PRESIDENT said the Preliminary Examination Marks Committee had had one meeting, and had referred some matters to Dr. Tweedy. They had not yet received his reply, and therefore their report could not be made until the next meeting of the Council.

Mr. BRUNKER then stated what had been done up to the present by the Examinations Improvement Committee. They had had full meetings on the 1st and 10th of November. It was decided to postpone any matters on which they were not unanimous. Accordingly a proposal of Dr. Collins that candidates who answered well in particular subjects at an examination should not be re-examined in those subjects was postponed for further consideration. On the motion of Dr. Collins the Committee agreed that candidates who were rejected should, upon their own application, be informed by the Registrar in what subjects they had failed, but not given their marks.

Mr. SIMPSON: I think we are all unanimous about that.

The recommendation was passed.

Mr. BRUNKER said the next recommendation was made on the motion of Professor Tichborne, and was that, in order to enable all candidates for examination in practical chemistry to be examined at the same time, two additional table benches should be provided.

The VICE-PRESIDENT: I think it a great pity that the whole of the examinations are not taken up on the same day.

The PRESIDENT: So do I.

Mr. BRUNKER: If you could get a sufficient number of members of the Council to attend to help the examiners, it could be done.

Mr. HAYES: If the examinations were all held on the one day you could easily get men to attend.

The matter was referred to the House Committee.

Mr. BRUNKER said the next proposition the Committee had had to consider was one by Professor Tichborne, that the examiners should be asked to meet at the close of the examinations for the purpose of considering doubtful cases. This was favourably entertained, but was postponed for further consideration; and it was ordered that in the meantime the views of the examiners should be ascertained. A proposal that candidates should be allowed to carry away their examination-papers at the close of the examinations was agreed to.

The last recommendation was approved by the Council.

Mr. BRUNKER, in continuation, stated that on November 29, at another meeting of the Council, the proposition of

Dr. Collins, that rejected candidates should not have to be re-examined in branches in which they had passed well, was again taken into consideration; but the feeling of the Committee was against it. Letters were read from the examiners, as follows:—

Dr. WHITLA (Belfast) wrote:—"If the Committee feel a consultation necessary, I shall be only too glad to fall in with it; but with the very excellent system of marking I cannot see the use of such, and of course I could not go back to Dublin to attend a conference upon the question of a doubtful candidate getting through. I would communicate any idea I might have in writing. Already it is a sacrifice every time—which I feel I make in the interests of the Society—going up to Dublin; but assure Mr. Allen that I hope my non-residence will have nothing whatever to say in preventing the Committee coming to a proper and satisfactory conclusion. If the Committee think a personal conference necessary each time, I shall easily get them out of any difficulty as regards myself."

Mr. C. EVANS (Dublin) remarked that "a case occasionally arises where, if a candidate fails by only a few marks, it would be well to leave it to the discretion of the examiners as to whether to reject or pass, according to their judgment of his general ability." But the writer said he would prefer to leave the consideration of this question entirely in the hands of the Council, whose wishes he would endeavour to meet in every way.

Mr. H. C. DRAPER (Rathgar) wrote:—"Being desirous in every way to aid the Council in its efforts to render its examinations as efficient and as fair as possible, I am, should it be decided that this can be advanced by a 'conference of the examiners in doubtful cases,' willing, at least experimentally, to adopt that course. As the Committee has done me the honour to ask my views on the subject, I would observe that a 'doubtful case' considered in any other way than in relation to the marks of the candidate would, if decided in his favour, seem logically to involve either some impossible change in his marks or some special observation placed against his name (introducing perhaps no less a difficulty). It would become necessary, therefore, if the system of conference be adopted, either to considerably modify the present system of marking or to altogether abolish it. Great care, also, would, it appears to me, have to be exercised, in order to prevent—if this system were made a recognised feature of the examinations—every rejected candidate claiming as a right the appeal of conference. I do not say that this would be a fatal objection, but I submit that it would have grave inconveniences."

Mr. BRUNKER said that if the practice of a conference between the examiners should be adopted, some modification would have to be made of the hard-and-fast way of marking; but he did not think the difficulty was insuperable. The system of marking might be left as it was, but a discretion might be given to the examiners to make concessions where they thought that the intelligence and information of the candidates justified it.

The VICE-PRESIDENT said a difficulty in the matter was that the marks were registered; were they afterwards to be stultified by an alteration in the opinion of the examiners? The only possible way of dealing with the matter was by sweeping away the present system of marking, and allowing the examiners to mark in any way they pleased for their own guidance, and each of them to say "yes" or "no" as to whether a man was to pass or not. If there were a doubt as to the competency of any candidate, let there be a conference of the examiners about him. But he did not think it would be possible to maintain the present system of marking and have the conference of examiners as well. They would differ, and there would be no end of trouble arising out of it.

A motion for the re-appointment of the Committee was then passed, and on the suggestion of the Vice-President, Mr. Simpson was added to it.

Mr. William Corbett Hendry, of Dungarvan, was elected a member on the suggestion of Mr. Brunker.

The PRESIDENT directed Mr. Ferrall to write to Sir M. Hicks Beach, asking when it will be convenient to him to receive a deputation relative to the Pharmacy and Poisons Acts before the opening of Parliament.

Some financial business was then disposed of, after which the Council adjourned.



## SIMPLE CHEMICAL EXPERIMENTS.

*Being the Result of POST-CARD COMPETITION No. 8.*

*(Continued from page 734.)*

**Instantaneous Crystallisation.**

About 1 oz. of Glauber's salts; wrap well in paper.

**DIRECTIONS.**—Put about  $\frac{3}{4}$  oz. of Glauber's salts in a wide-mouth bottle, also pour 2 oz. of warm water. Tie tightly over with a piece of skin, or cork well. In this state it will not crystallise, even when cold; but if the skin be pierced with a knife it will commence to crystallise at once, and proceed with great rapidity. C. W. L. SCOTT, Ulverston.

**Heat and Cold.**

A small piece of fresh lime; nitric acid and sulphuric acid, of each 1 oz., separately in bottles. Label both "Poison."

**DIRECTIONS.**—Dissolve a little of the lime in nitric acid; then pour some of the liquid into a glass and add a few drops of sulphuric acid; the whole will become nearly a solid mass, and at the same time give out a strong heat.

C. W. L. SCOTT, Ulverston.

**Fire under Water.**

Put a small piece of phosphorus in a wide-mouth bottle full of water, and some sulphuric acid in a stoppered bottle. Label distinctly "Poison."

**DIRECTIONS.**—Into a glass of water put a few small pieces of zinc and a small piece of phosphorus; then plunge a glass tube into sulphuric acid, and place the thumb over the upper orifice; withdraw the tube, which must be instantly immersed in the glass, and remove the thumb. Phosphuretted hydrogen will presently be disengaged, which will inflame on rising to the surface of the water. C. W. L. SCOTT, Ulverston.

**A Tin Tree.**

A small quantity of chloride of tin and a like quantity of strong nitric acid. The nitric acid is better put into a stoppered bottle. Label them both "Poison."

**DIRECTIONS.**—Into a wide-mouth bottle put in about 3 drachms of chloride of tin and fill up with rain or distilled water; also drop about 10 drops of strong nitric acid in. When the salt is dissolved, suspend a piece of zinc wire, and carefully set aside to precipitate. In a few hours the tin will have deposited on the zinc in very pleasing forms.

C. W. L. SCOTT, Ulverston.

**The Well of Fire.**

Phosphuret of lime in wide-mouthed bottle, corked will do.

**DIRECTIONS.**—Take a tumbler three parts full of water and drop in the phosphuret of lime. Phosphuretted hydrogen gas will be produced, will rise in bubbles through the water, and take fire when they burst through the surface, ending in beautiful ringlets of smoke. J. C. CROASDALE, Ulverston.

**The Burning Liquid.**

Take 1 oz. of turpentine and  $\frac{1}{2}$  oz. of nitric acid, with a few drops of sulphuric acid in the nitric acid.

**DIRECTIONS.**—Pour the turpentine into a saucer, then add carefully the nitric acid. It will immediately burst into flame. J. C. CROASDALE, Ulverston.

**The Chameleon Mineral.**

Take 3 parts nitrate of potass, 1 part manganic oxide; heat strongly in a crucible fifteen minutes. To be sent out in a chip box or a slide cardboard box.

**DIRECTIONS.**—Place a few grains in a glass tumbler and pour hot or cold water on. It will assume the following colours: green, blue, violet, indigo, purple, and red.

J. C. CROASDALE, Ulverston.

**The Chemical Miraele.**

Take a saturated solution of sulphate of magnesias and a like solution of caustic potass. To be sent out in separate bottles.

**DIRECTIONS.**—Mix the two liquids together in a wine-glass, and the mixture will immediately become almost solid. J. C. CROASDALE, Ulverston.

**The Magic Fluid**

Take three  $\frac{1}{2}$ -oz. bottles. Fill one with a strong solution of alum; another with strong solution of potash; and the other with strong sulphuric acid. Label the potash and sulphuric acid, "Poison."

**DIRECTIONS.**—Pour boiling water on a few sliced red-cabbage leaves, and let it stand for an hour. Then pour the clear liquid into three wineglasses, containing in one solution of alum, another the potash, and the other the sulphuric acid. The first will assume a purple, the second a bright green, and the third a beautiful crimson.

J. C. CROASDALE, Ulverston.

**The Crystalline Tree.**

Gum benzoin in coarse powder, in slide boxes or paper.

**DIRECTIONS.**—Take a large jar inverted on a brick tile, containing near the top a branch of fresh rosemary or other shrub moistened with water. Introduce a heated iron with some of the powdered benzoin on. It will sublime and condense on the tree, and form a most beautiful appearance.

J. C. CROASDALE, Ulverston.

**Will-o'-the-Wisp.**

Make some phosphorised ether by dissolving phosphorus in ether. Send out in closely-corked or stoppered bottles.

**DIRECTIONS.**—Pour a few drops on a piece of lump sugar, and drop it into a glass of warm water. The surface of the water will become luminous; move gently by blowing, beautiful and brilliant undulations of the surface will be produced.

J. C. CROASDALE, Ulverston.

**Blood-red Writing on the Arm.**

This truly astonishing trick is a pure chemical experiment, and was introduced by the late Robert Heller, and was considered one of his best illusions.

**MATERIALS.**—Six plain cards on which any lady's name is written—say Jane, Mary, Ann, or such like; the six cards must have each the same name written thereon. Half-ounce indiarubber ball enema, camel-hair pencil, 2-oz. flat bottle filled with a solution composed of tinct. ferri perchlor. and water, of each 1 oz.; 2-oz. flat bottle filled with a solution of sulphocyanide of potassium, 1 in 10 water. The bone nozzle of the enema must be cut so short that when it is placed between the fingers it may not be seen projecting. The nozzle must be plugged with beeswax, and a pin or needle inserted through the wax.

**DIRECTIONS.**—Ask some lady friend on the quiet to allow her arm to be operated on; then with the camel-hair pencil, which must not be too wet, write with the solution of iron the name on the lady's arm which has already been written on the six cards. The writing will soon dry and be invisible. The lady may now be led into the room and seated on a chair as far back as possible; she may now be blindfolded. Having taken the six cards out of your pocket, shuffle them, and say that you have a number of cards in your hand on which a number of ladies' names are written. Then ask the blindfolded lady if she can see the cards; of course she cannot. Allow any person in the room to select one of your tickets, which tell the person to retain. Now place the little ball enema in the right hand with the nozzle between the fingers; and, as it has been charged with the solution of potassium sulphocyanide, it is an easy matter to direct the spray to fall on the lady's arm by waving your own hand at a distance of eighteen or twenty inches from her arm. When the full name has been produced, you may now turn to the person who drew the card, and ask if this was the name written on the card, which it is most likely to be. Now lead out the lady amid the plaudits of the wonder-stricken beholders. The materials for above are not expensive, and could make a nice little case.

N.B.—One object of blindfolding the lady is to prevent the spray from going into her eyes. ARCH. PATERSON.

**Pyrophorus.**

Pyrophorus is a powder which, on being shaken into the air takes fire. The preparation of it is as follows:—A small



quantity of tartrate of lead (prepared by precipitating lead acetate with tartaric acid) is placed in a small bottle in a crucible, which must be subjected to a clear heat till all vapour ceases to come off, when a cork must be securely fitted to the bottle, the contents of which are now pyrophorus.

A small quantity might be placed in a bottle, and labelled as follows:—"PYROPHORUS.—A little shaken into the air will ignite with beautiful scintillations."

F. H. HANCOT, Liverpool.

#### The Rainbow Fire-cloud.

REQUIRED.—(1.) A strong globe of iron or brass capable of holding half a pint, in which are two apertures—the one for putting the liquids through, the other should have a small tap fixed into it. This represents a steam-boiler—the manhole to put the water in, the jet to blow the steam off when the water boils. (2.) Methylated spirit of wine, 5iv.; cupri nit., strontiae nit., barytae nit., cupri chloridi, ana 3j. These salts colour the flame green, red, yellow, and blue.

DIRECTIONS.—Mix the powders with the liquid and put into the boiler, and screw the entrance up perfectly vapour-proof. The boiler should now be set upon a retort-stand, and a spirit-lamp placed underneath it. By means of the jet-tap it is easy to find when the liquid boils. As soon as this takes place, the steam is shut off, and the heat continued for about five minutes. The jet-tap being now turned on, the whole of the liquid blows out with considerable force, and assumes the shape of a cloud. Now light it, and you will be amply repaid for your trouble when you see the cloud on fire in different colours.

E. L. THOMAS, 155 Praed Street, W.

#### Chemical Landscapes.

One of the prettiest and most interesting chemical experiments imaginable is that resulting from immersion of some lump ammon. hydrochlor. into a 25-per-cent. solution of nitrate of lead strongly acidified with nitric acid. Suitable proportions are 2 oz. nitrate of lead, 6 oz. distilled water,  $\frac{1}{2}$  oz. nitric acid, from 2 to 3 drachms of ammon. hydrochlor. The chemical action may be explained as follows:—The nitric acid decomposes the hydrochlorate, forming ammonia nitrate and setting free chlorine gas, which the moment the outer circumference of each minute bubble comes in contact with the lead solution forms insoluble lead chloride. This is piled up in the most fantastic shapes, hollow stems reaching to the surface of the solution. After a few hours splendid crystals of ammonia nitrate begin to form. The effect is indescribably beautiful. With a little imagination, perfect winter landscapes, ruins, trees, palms, &c., may be made out. The vessel containing the solution should be placed on a mantelshelf, or some place where it is not likely to get shaken. This is a *sine qua non*. If undisturbed, it will last for days. The cost, with the nitrate at 6d. per lb., is almost nil.

M. BUCHNER, 149 Houndsditch, E.C.

#### "The Four Elements."

The evolution of chaos into earth, air, fire, and water can be represented in the following manner:—In a narrow phial or glass tube pour mercury to the height of one-fourth of its capacity; for the next fourth, add a saturated solution of subcarbonate of potash; next fourth, methylated or pure spirits of wine, tinted blue; and, lastly, turpentine tinted red. On shaking this mixture together you will have a representation of chaos; but soon, on resting, the elements will separate themselves, and the mercury will represent earth, the blue spirit air, the red turpentine fire, and the colourless potash solution water.

ALCHEMIST.

#### To Melt Silver in a Walnut-shell.

Mix together in a mortar 3 parts of nitre, 1 of sulphur, and 1 of sawdust. Fill a walnut-shell tightly with this, and insert in the mixture a threepenny piece. Light the mixture, and the silver will melt, while the shell will be only charred.

ALCHEMIST.

#### The Magic Spoon.

Fuse in a crucible 15 parts of bismuth, 9 of lead, and 6 of tin, and make spoons of the mixture. This metal will fuse and disappear in a cup of tea.

ALCHEMIST.

#### The Ghastly Flame.

Burn in a saucer half a gill of spirit to which has been added 2 or 3 teaspoonfuls of salt and a pinch of saffron. Put out all other lights, and the faces of the company assembled round the small cauldron will assume a ghastly aspect.

ALCHEMIST.

#### The Magic Bottle.

Into a wine-bottle put some water and enough logwood powder to bring it to the tint of claret. Prepare four wine-glasses as follows:—(1) Cleaned with pure water; (2) containing a few drops of acetic acid; (3) containing a few drops of solution of potash; and (4) containing a small piece of alum. On pouring from the bottle into these glasses you will have liquids resembling, respectively, claret, sherry, gin, and port.

ALCHEMIST.

#### Magic Dye.

Dissolve indigo in dilute sulphuric acid, and add to it an equal quantity of solution of carbonate of potash. A piece of white cloth dipped in this mixture will become blue; a piece of yellow cloth will become green; a piece of red cloth, violet; while a (vegetable dyed) cloth will turn red.

ALCHEMIST.

#### Chameleon Mineral.

To prepare it, take manganese deutoxide, 1 part, and 3 parts potassii nitras. Powder finely, mix, and place in a small crucible, which must be kept at a red heat, in a common fire, for twenty minutes; then let them cool.

DIRECTIONS.—Place as much as will cover a sixpenny-piece of this substance in each of two glasses; pour cold water into one, and the liquid will become first green, then, in a few moments, purple, then red. Fill the second with moderately hot water, and you will obtain a beautiful violet, which changes into crimson. The colours will be of greater or lesser intensity in proportion to the quantity of powder used; and, in the course of the changing of colours, the various intermediate shades will be observed. Should be packed in a small wide-mouthed bottle.

E. L. THOMAS, 155 Praed Street, W.

#### Boiling Without a Fire.

APPARATUS.—One oz. test-tube; twisted wire, to hold the test-tube; 1-oz. phial containing S.V.R. (or methylated spirit), coloured with cochineal or red sanders wood. The above to be packed in a cardboard box.

INSTRUCTIONS.—Half fill the tube with the spirit; fill a 1-lb. gallipot or jam-pot with boiling water; let it stand two minutes; pour away, and refill with boiling water. Dip the tube (holding it by the wire) in the hot water, and in a minute or two the spirit will boil.

USES.—With appropriate explanation this experiment will illustrate the process of distillation, which consists essentially in separating two substances (one more volatile than the other) by heating them sufficiently to evaporate one but not the other.

JAMES BROWN, Amptill.

#### To Produce Fire from Two Liquids.

INGREDIENTS.—(1) Glauber's spirit of nitre; (2) spirit of turpentine (or oil cloves or caraway); in two phials.

DIRECTIONS.—Take a drachm of each solution, put No. 2 into a glass vessel and add No. 1—both solutions in themselves being perfectly cold. A great flame will arise and destroy them both, leaving only a little resinous matter at the bottom.

J. A. WOOD, Eckington, Chesterfield.

#### Crystallisation.

Take 1 oz. alum; dissolve in 1 oz. hot water; put into a 2-oz. bottle, and the crystals of alum will make their appearance by degrees on the sides of the bottle.

H. J. DEAN, Chesham.

#### Lead Tree.

Take  $\frac{1}{2}$  oz. of sugar of lead, and dissolve in three-quarters of a tumbler of clean cold water; then suspend by means of a thread from a bit of wood across the glass a small piece of zinc so that it hangs in the liquid, and in a few hours crystals of metallic lead will be deposited on the zinc, forming a tree-like growth.

H. J. DEAN, Chesham.

(To be continued.)



## Legal Reports.

**THE ANGUS CASE.**—In the Queen's Bench Division of the High Court of Justice, London, on Friday last, before Mr. Justice Denman and Mr. Justice Hawkins, sitting as a Divisional Court, an application was made by Mr. Etherington Smith for a *rule nisi* to issue calling upon Messrs. Forbes, Abbot & Leonard, chemical manufacturers, to show cause why a writ of *certiorari* should not be granted to remove into the Queen's Bench Division of the High Court any indictment that might be found against John Angus and Stephen Rafflaovich at the Central Criminal Court. From the statement of the counsel, it appeared that the applicants, John Angus and Stephen Rafflaovich, a chemical broker of the City of London, and his clerk, respectively, were on Nov. 26 committed at the Mansion House by Sir Andrew Lusk to take their trial at the next session of the Central Criminal Court on a charge of obtaining by conspiracy from Messrs. Forbes, Abbot & Leonard certain acceptances to a very large amount. The ground on which the application was made was that a special jury of the City of London should hear the case, as the defendants believed that their defence could not be a fair and proper trial at the Old Bailey because the whole question was a very complicated matter of accounts. The defendants were instructed in October 1885, by two members of the prosecutor's firm, to purchase for them as a speculation a cargo of nitrate of soda. They made the purchase, and it was arranged that the defendants were to provide for the payment, and to realise on the cargo. Subsequently the defendants received orders from the same firm to purchase another cargo of nitrate of soda. The whole money for both cargoes had been paid by the defendants. To assist Angus in paying for the first cargo the plaintiff's firm paid him, 1,500*l.* in cash, and on May 13, 1886, he further received an acceptance from them for 1,500*l.* In pursuance of the arrangement, he proceeded to realise the cargo, and was compelled to procure advances, in the one case from the Bank of Antwerp, and in the other case from the Bank of Scotland. In consequence of the failure of a certain firm who were largely indebted to him, before he had received remittance from the agent at Antwerp, Angus was obliged to file his petition. The composition was confirmed by the Registrar of the Bankruptcy Court, notwithstanding the opposition of Messrs. Forbes & Co. The latter firm then charged Angus with obtaining money by fraud. It was alleged by the prosecution that the defendant Angus obtained the money without just cause, and that the other defendant, Rafflaovich, conducted some of the correspondence and conspired with Angus. The defendants, or present applicants, relied for their defence upon the investigation of the accounts, which were very complicated, and could not be properly examined and understood by a common jury at the Central Criminal Court. The charge against the defendants was based upon dealings between a chemical broker and a chemical manufacturer for cargoes which it was stated the defendants were ordered to buy on speculation, and they engaged to finance and realise those cargoes. The defendants were at present out on their own recognisances, but the case was a fit and proper one to be tried in the High Court before a special jury of the City of London. Mr. Justice Denman said that the juries at the Central Criminal Court were excellent ones, and generally showed sufficient intelligence for cases of this sort. Mr. Etherington Smith submitted that the special juries of the City were composed of merchants and manufacturers—men accustomed to deal with large financial operations, and the whole question was entirely one of accounts between a chemical broker and a manufacturer. In the result their Lordships granted the *rule nisi*.

### TRANSFER AGENTS.

The case of Crocker *v.* Bulgin, tried on Wednesday, at the Lord Mayor's Court, before Sir Thomas Chambers, Q.C., Recorder, was of special interest to chemists. The plaintiff, who carries on business as a transfer agent at Walbrook, E.C., sued the defendant for commission alleged to be due on account of the sale of his business at 22 New Road, Gravesend, to Mr. C. W. Botwood. Defendant denied the liability.

Mr. Lewis Glyn appeared for the plaintiff, and Mr. Wildey Wright for the defendant.

The plaintiff stated that Mr. Bulgin's business was placed in his hands in April of this year. He advertised it three times as a business in Kent. In reply to an inquiry from Mr. Botwood he had given that gentleman full particulars of this business, and at the same time of a business at Hadleigh, in Suffolk. At the same time he had written to defendant to advise him that Mr. Botwood would probably call on him. Proof of this letter being challenged, the plaintiff and his clerk swore that the letters just alluded to were written and posted on June 28, and that an order to view was enclosed in the letter to Mr. Botwood. The letter-book containing copies of these letters was produced. On July 22 Mr. Botwood called at plaintiff's office and a long conversation ensued. Mr. Botwood said he had sold his business at Poole and was now prepared to purchase another. He asked if plaintiff thought the Gravesend business would suit him, and was recommended to buy it. He promised to go and look at it and took a fresh order. On July 29 Mr. Botwood wrote to plaintiff asking terms for selling businesses, valuing, &c. No more was heard about the affair until August 13, when the defendant (Mr. Bulgin) wrote to the plaintiff to notify him that he had disposed of his business, but not stating who was the purchaser. Plaintiff only heard this on September 3, when he wrote to Mr. Bulgin claiming to have introduced Mr. Botwood. Defendant replied on September 6, stating that Mr. Botwood had brought an order from another agency, and asking Mr. Crocker for the date of his order. Plaintiff wrote on September 7 declining for obvious reasons to give the date, but briefly recounting the transaction. Defendant afterwards called on plaintiff and said he could do nothing if the latter declined to furnish him with the basis of his claim.

Cross-examined, the plaintiff said it was a common practice to place a business in the hands of several agents, but he declined to express an opinion whether it was the practice to pay the commission to the agent who first introduced the customer. At the interview with Mr. Botwood he was sure the Gravesend business was talked about, but other businesses were also discussed at the same time. The order book was produced, and it appeared from the counterfoils that orders to view businesses at Brighton and Walton-on-the-Naze, as well as at Gravesend, had been given to Mr. Botwood. Previously an order to view a business at Hadleigh had also been sent to Mr. Botwood.

For the defence, Mr. C. W. Botwood, of Gravesend, and Queen's Crescent, Haverstock Hill, said that he was first told of Mr. Bulgin's business in the office of Messrs. Orridge & Co. about May 28. He had not then left Poole. About the end of June he communicated with Mr. Crocker, who sent him particulars of five or six businesses. Of these he only took further steps in regard to the business at Hadleigh. Mr. Crocker's advertisement only stated that the Gravesend business was "in Kent." He called on the plaintiff on July 22, but as far as he could recollect no mention was made of the Gravesend business at that interview. They had conversed chiefly about the Hadleigh business, and about one at Taunton. Mr. Crocker had given him several orders to view, but he did not use the one for the Gravesend business. He was then looking out for a larger business, and he did not go to Gravesend until the 7th of August, when he was accompanied by one of Messrs. Orridge's clerks.

Cross-examined by Mr. Glyn: Witness said he had had several businesses. He had sold four altogether. He had not made an arrangement with Messrs. Orridge pledging himself to buy from no one except through them. He had told Mr. Griffiths, of Hadleigh, that if he purchased his business it must be through Messrs. Orridge. Witness would not admit that he had told Mr. Griffiths that this applied to any business. Questioned as to why he had written to Mr. Crocker asking for his terms, he said he did so because he wished to know them. He thought such a course was perfectly fair. He did mention to Messrs. Orridge & Co. that Mr. Crocker had given him an order to view the Gravesend business.

Mr. Thomas Hawkins, principal of Messrs. Orridge & Co., said Mr. Bulgin had first placed his business in their hands for disposal about two years ago. It was withdrawn for a time, and they were again instructed on December 17, 1885. They had advertised it repeatedly, and introduced it to a



great many people. Ledger produced with an entry showing that it had been named to Mr. Botwood on May 27. He had repeatedly talked it over with Mr. Botwood. Had had no correspondence on the matter as Mr. Botwood was frequently in his office. The purchase was settled in his office in August.

In cross-examination, Mr. Hawkins said the business was sold for 800%, and the commission paid to him was 22/ 10s. He did not give Mr. Botwood an order to view the business on May 27.

Mr. Bulgin, the defendant, admitted that he had authorised Mr. Crocker to sell his business in April last, but said he first heard of Mr. Botwood through a letter from him, dated August 3, in which he stated that he had had an order from Mr. Crocker, and had previously heard of his business from Messrs. Orridge, but did not at the time take any further steps in reference to it. Soon after Mr. Botwood came to him, accompanied by Messrs. Orridge's clerk. In cross-examination, he said he never received the letter which Mr. Crocker and his clerk said had been written to him on June 28. He had paid commission to Messrs. Orridge unconditionally.

After counsel had addressed the jury, the Recorder said the question for the jury was, through whose intervention had the introduction been efficaciously brought about? Agents had to take risks of advertising and other labours, but they ought not to be required to take risks of persons going to them and asking for particulars simply for the purpose of displacing them. Mr. Botwood had said almost in definite terms that in going to Mr. Crocker he did not intend to buy through him; but the jury had to consider whether Mr. Crocker or Mr. Hawkins had most definitely introduced the business to Mr. Botwood.

After a few minutes' deliberation the jury found for the plaintiff.

#### ALLEGED NEGLIGENCE BY A CHEMIST.

In the Queen's Bench Division of the High Court of Justice on Thursday, before Mr. Justice Day, the case of Bowater v. Smith, one of considerable interest to chemists and druggists, came on for hearing. The action was brought by John Bowater and Jane Bowater, his wife, residing at Woolwich, against Mrs. Smith, a widow, carrying on the business of a chemist and druggist at the same place. The plaintiffs, in their statement of claim, alleged that they had suffered damage by reason of the defendant having, on February 24 last, negligently furnished to the female plaintiff as a medicine a drug purporting to be confection of senna, but which was in fact belladonna or some other highly poisonous substance; that the plaintiff, Jane Bowater, and her infant child were in consequence occasioned and had suffered serious illness and permanent injury; and that the plaintiff, John Bowater, had been deprived of the services of his wife, and had incurred medical and other incidental expenses in connection with her illness. The damages were assessed at 500%.

Mr. Lawrence Walton appeared for the plaintiffs, and Mr. Jelf, Q.C., and Mr. Herbert for the defendant. The defence was undertaken by the Chemists and Druggists' Trade Association of Great Britain.

Mr. Lawrence Walton, in opening the case, said that the plaintiffs were people in a comparatively humble walk of life, Mr. Bowater being employed in a sugar-factory at Woolwich. Mrs. Smith carried on the business of a chemist and druggist. The counsel did not understand that she had any qualification for exercising that trade. Mrs. Smith dispensed and supplied drugs in the ordinary way of business, and Mrs. Bowater was confined of a child on February 20 of this year, and within a few days of her confinement it became necessary she should take some mild aperient. Confection of senna, which was a sweet and pleasant substance to take, was often taken by women during confinement, and Mrs. Bowater sent her girl Eliza to Mrs. Smith's shop for a pennyworth of this confection. Mrs. Smith supplied the child with a pennyworth of jamlike substance in a chip box, and when the child took the box home it was placed on a sideboard in Mrs. Bowater's bedroom. It was left there for some time, but during the course of the afternoon the child, who had taken confection of senna before, began to bother her mother to give her some. The female plaintiff asked the

child to hand her the box and to give her a spoon. A spoon was fetched from downstairs, and thereupon she gave the child a little of the substance in the box, taking the major portion of it herself. The child spat the stuff out of her mouth, saying it was nasty, and Mrs. Bowater perceived it had a disagreeable and to her an unusual taste, and in consequence directed the child to throw the box in the fire. Unfortunately, what was taken by Mrs. Bowater was not merely nasty, but a highly deleterious poison. Within a very short time of having taken the stuff the female plaintiff was seized with the most violent pains, and was for some time in great agony. Mr. Baxter, a doctor's assistant, was sent for, and he found that the symptoms were those of poison, and he administered to the patient an emetic and restoratives, and these gave her temporary relief. The substance supplied had been found to be belladonna, and in consequence of the defendant's negligent act Mrs. Bowater had been put to great pain and inconvenience, and Mr. Bowater to considerable expense. The present action was brought to recover such compensation as the jury thought the plaintiffs were entitled to.

Mrs. Jane Bowater said she was the wife of John Bowater, of Albert Road, North Woolwich. She was confined on February 28, and at that time it was necessary she should take an aperient. She sent her child, Eliza Jane, to Mrs. Smith's shop for some confection of senna. The child knew what confection of senna was, and she had often been to Mrs. Smith's shop. She brought back from the shop a little chip box. The child was fond of confection of senna, and she wanted some of that which had been supplied to her. Witness told the girl to fetch a spoon. The spoon was brought and witness gave the girl a little of the substance, but she spat it out saying it was nasty. Witness thereupon took a large portion of the pennyworth of the substance, and she perceived it had an unusual taste, and therefore ordered her girl to throw the box in the fire. Shortly afterwards the witness experienced great pain. Her neighbours came in, and Mr. Baxter was sent for, and he administered an emetic. She was greatly relieved, but the pain returned the next day. She even now felt the effects of the poison, for such she believed it to be. She felt great pain after meals, and got very little sleep at night. Of course she had had to have medical treatment and considerable nursing. She had since seen Mrs. Smith, who declared that it was confection of senna she supplied, and nothing else.

Cross-examined by Mr. Jelf: She had not always been nervous, but she had been very nervous since this event. When the girl brought the chip box from Mrs. Smith's, it was put upon a sideboard in the bedroom. She had had four children, but had never had occasion to use belladonna. She never heard of belladonna before the doctor said he thought what was in the box was belladonna. When she had weaned her children she had never had occasion to apply ointment to her breasts. The box remained upon the sideboard about two hours—from 3 to 5 P.M. The child fetched the spoon which was used from downstairs. Witness took the substance from the box with the handle of the spoon. The substance was not harder than confection of senna usually is. Directly she took the stuff she experienced a peculiar sensation in her stomach. She had not the presence of mind to keep the box; she did not like the taste of the substance, and therefore told her girl to throw the box containing it away. The spoon was put on a tea-tray after it had been used. The spoon and tray were taken down stairs by a nurse, who was at the time in the house. She did not believe she had taken poison until the doctor suggested that what she had taken was poison.

Mr. Robert Henry Harland, an analytical chemist carrying on his profession in Lombard Street, said he was asked to attend an analysis which was made by Professor Attfield on behalf of the defendant. A spoon was produced by the clerk to the defendant's solicitor. The spoon was sealed up, and Professor Attfield broke the seal in his presence. Witness formed the opinion that what he found on the spoon was not confection of senna, but that it had every appearance of being extract of belladonna. There had since been a further examination by Professor Attfield at which witness was present, and witness unhesitatingly came to the conclusion that the substance on the spoon was extract of belladonna, pure and simple.

John Bowater said that on the evening of the 24th of Feb-



ruary last he was fetched home from the sugar-factory at which he worked. He found his wife dangerously ill. She was very unwell for three weeks, and, indeed, had never been thoroughly well since.

Eliza Jane Bowater, the daughter of the plaintiff, having deposed to the part she had played in the transaction, Ann Bailey, wife of Henry Bailey, and a monthly nurse, said she was engaged to wait upon Mrs. Bowater during her confinement this year. She knew that confection of senna was sent for. The child took the box she brought from Mrs. Smith's upstairs to her mother. About half-past five o'clock on the day the stuff was taken. Witness took Mrs. Bowater some tea and toast. The patient complained of being in very great pain, and witness advised her to drink some of the tea she had brought. The tea only made the plaintiff worse, and therefore a doctor was sent for. Mr. Baxter came very speedily, and he administered an emetic, which acted. Mr. Baxter questioned Mrs. Bowater as to what she had taken, and asked for the spoon that had been used. Witness, who had taken the spoon downstairs on the tea-tray, fetched it up for Mr. Baxter's inspection.

Cross-examined by Mr. Jelf: When the child brought the box from Mrs. Smith's witness opened it, and said to the child, "That's all right; take it upstairs." She had often seen confection of senna, though she had never taken it. The stuff in the jar (produced) resembled the confection of senna that she had smelt; she hardly thought it was like it in appearance. Witness had never used belladonna; she did not know what it was like. When Mr. Baxter administered an emetic Mrs. Bowater vomited a great deal. Mr. Baxter did not keep any of the vomit for the purpose of an analysis; the vomit was very black. Mrs. Bowater was not of an unusually nervous temperament.

Re-examined by Mr. Walton: No one suggested that the vomit should be kept. There was no other box but the one sent by Mrs. Smith on the sideboard in the bedroom. There was no spoon about the house which might have been mistaken for the spoon Mrs. Bowater had used.

Mrs. Healds, a neighbour of Mrs. Bowater, deposed to being called in on the afternoon in question and finding the female plaintiff in great pain.

Mr. Henry Baxter said he acted as a medical assistant to Mr. Bryson. He happened to be present in the surgery when Mrs. Bowater sent for assistance. Dr. Bryson was not at home, and therefore witness waited on Mrs. Bowater. He found her sitting up in bed. She was in a rather excited state, and complained of burning pains in the mouth and throat. The pupils of the eyes were very much dilated and the eyes prominent. There was a swelling round the throat, and also round the abdomen, and the hands and arms were also swollen. He asked for a spoon with which he might look down the patient's throat, and two spoons were brought to him. Previously he asked Mrs. Bowater if she had taken anything, and she said she had not. He said "You must have taken something," and then she said she had had some confection of senna. Witness asked if she had the box with the remains of the confection in it, and the plaintiff said she had not; it had been thrown in the fire because it was not like what they had had before. Mrs. Healds brought the two spoons up. From the symptoms of the illness, and from the smell of the remains on the spoon which had been used, he at once came to the conclusion that the case was one of belladonna poisoning. Witness sent her an emetic, and in the presence of a neighbouring greengrocer sealed up the spoon which had been used in taking the substance supplied by the defendant.

Cross-examined: He was not present when the emetic had its effect. He called at Mrs. Smith's to warn her, lest the mistake might occur again. Mrs. Smith said she had no belladonna in the shop, and asked witness to look through the shop. He did not, however, do so. Neither witness nor Dr. Bryson had tried to get Mrs. Smith's business.

By a juror: Traces of belladonna would have been found in the vomit. When he went to the house a second time the vomit had been thrown away. No doubt he ought to have told the people in the house to save the vomit, but he did not think of it.

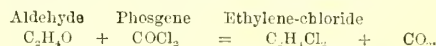
Mrs. Wilson, a neighbour, described Mrs. Bowater's illness after she had taken the substance in question, and at this point the Court rose.

## MANUFACTURE OF SALOL.

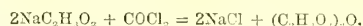
By DR. HUGO ECKENROTH.

IN a recent number of the *Pharm. Zeit.* a process for the manufacture of salol was described by Mr. B. Fiseher. In studying that process it occurred to the author that *phosgene* (carbon oxychloride,  $\text{COCl}_2$ ) would be a much better medium for the preparation of salol. This body is a gas at ordinary temperatures, and may be prepared in various ways, but most practicably by passing carbonic oxide through a boiling solution of antimony or phosphorus pentachloride.

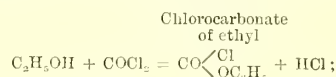
Phosgene readily parts with its chlorine; for example, in the preparation of ethylene chloride from aldehyde:—



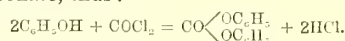
Another phase of its action is seen in the decomposition which acetate of sodium undergoes when a stream of the gas is passed through it. Here the acidulous radicle is reduced to the anhydrous state, as will be seen from the following equation:—



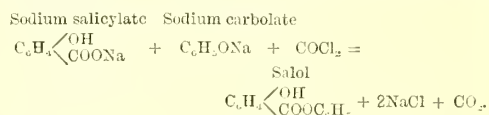
Similarly alcohols are reduced to ethers by phosgene: for example, ethyl alcohol reacts as follows:—



while carbolic acid is decomposed by liquid phosgene into phenyl-carbonate, thus:—



The application of phosgene to the preparation of salol is based upon the following reaction, which takes place when the gas is passed through a mixture of salicylate and carbonate of soda:—



In practice molecular proportions of salicylate and carbonate of soda are intimately mixed and placed in a flask provided with a well-fitting indiarubber stopper with two holes in it—one for a tube through which phosgene may be conveyed, the other for an exit tube about seven feet long. The gas being passed in in a slow stream, the beginning of the reaction is manifested by a considerable rise in temperature, which, however, falls speedily; and it is necessary, in concluding the operation, to heat the contents of the flask on a water-bath. The completion of the reaction is shown when a small portion of the contents shows, on testing, freedom from phenol. After this the contents of the flask are further heated on the water-bath for twelve hours; then washed free from sodium chloride by means of water, the salol being purified by repeated crystallisation from alcohol, whereby it is obtained in tabular-shaped crystals, having a melting-point of  $40^\circ \text{C}$ . When boiled with a caustic alkali it yields abundance of salicylic acid after the resulting solution is acidified.

Bromine water precipitates the salol from alcoholic solution in the form of long needles, which the author determined to be a bromo derivative. He dissolved salol in five times its volume of absolute alcohol, and added to the solution bromine in small quantities at a time, each portion being allowed to combine before another was added, until a yellow tint—which did not disappear in a short time—was imparted to the liquid. After ten hours crystals of a bromo derivative were obtained and purified by crystallisation from alcohol, it being so obtained in beautiful white silky needles, melting-point  $98.5^\circ \text{C}$ . (uncor.). The body was insoluble in water, difficultly soluble in cold, but easily soluble in boiling alcohol and ether. Two combustions of this body gave 27.42 and 27.45 per cent. of Br; so that in all probability its formula is  $\text{C}_{13}\text{H}_9\text{O}_3\text{Br}$ , which requires 27.3 per cent. Br. The author continues his study of the bromo-derivatives of salol, as well as the action of phosgene in the production of other "salols."—*Archiv der Pharmacie*.



## Abstracts of Recent Patents.

**CURE FOR RINGWORM.** (*Eleonora Gillett. No. 5,095. April 12, 1886.*) An ointment which consists of the following ingredients, "compounded in any convenient and suitable way familiar to the dispenser":—

|                         |            |
|-------------------------|------------|
| White precipitate .. .. | 20 drachms |
| Zinc, powdered .. ..    | 20 "       |
| White wax .. ..         | 20 oz.     |
| Butter or lard .. ..    | 40 "       |

**A MEAL POULTICE** (*C. J. Moore and James Lowaine. No. 962. January 21, 1886.*) which is portable. Made by placing a stratum of linseed or other meal upon muslin, covering same with glutinous (isinglass) solution and a piece of holland, then subjecting it to pressure.

**MEDICATING FOOD STUFFS.** (*Alice Jones. No. 12,454. October 19, 1885. 6d.*) A process is described for medicating sugar, starchy foods, and the like, with an oxide of iron. The patentee effects this by heating a spiral of No. 35 iron wire to redness; it is afterwards cooled, and covered with the material which is to be acted upon. A current of carbonic acid gas is then passed into the material until it is sufficiently charged with iron. Magnetic oxide of iron may be used for or along with the wire spiral, and the patentee may also add "alkaline neutral salts" and phosphates in order to increase the hematitic properties of the material and otherwise render it efficient "in cases of nervous and atonic digestion."

**KERATINE CAPSULES.** (*Peter Jensen. No. 14,189. November 19. 6d.*) Keratine is dissolved in liquid ammonia, the solution filtered through glass wool, and afterwards evaporated to a syrupy consistency. Shellac is likewise treated with ether, and the resinous insoluble residue (4 parts) is dissolved in borax (1 part) and distilled water (quantity not stated), the mixture being heated until solution is effected. This also is evaporated, after filtration, to a syrup. Equal parts of the two solutions are mixed together, and after the addition of a little ammoniacal solution of colophony the mixture is ready for forming into capsules. These are adapted for such substances as ext. filicis maris and copaiba, which it is desirable should pass through the stomach intact.

**LANOLIN.** (*C. D. Abel. No. 14,957. December 5, 1885. 6d.*) This patent relates to some modifications upon the process described in a previous patent (No. 4,992, 1882) for the preparation of "lanolin." Instead of separating the crude wool-fat by centrifugal action, the fat may be allowed to rise to the surface of the soapy liquid, and then be separated; the same result is effected by making a jet of water play upon the liquid, also by two other methods, involving the separation of the fat into fatty acids; and the applicant also claims for the use of other substances than the alkalies specified in the first patent. Notably he claims for the use of bicarbonates, silicates, borates, and all vegetable substances containing saponine, and for substances containing pancreatine, either, or all of which, might be used for producing an emulsion of wool-fat.

**ELASTIC STOCKINGS.** (*J. H. Haywood. No. 4,682. 1886. 4d.*) This provides for the production of seamless elastic stockings. Knitting is performed on a stocking-knitting machine, the elastic thread forming a spiral.

**CHILBLAIN LOTION.** (*J. C. Hill. June 5, 1886. 4d.*) A lotion which may be used for curing either bunions or chilblains, and consists simply of a mixture of 1 oz. of spirits of salt and 11 oz. of water.

**SACCHARINATED ALKALOIDS.** (*C. Fahlberg and A. List. No. 596. January 14, 1886. 4d.*) The object of the process covered by this patent is to render certain alkaloids of objectionable taste—such as quinine, strychnine, and morphine—more palatable. This is effected by making an aqueous or alcoholic solution of saccharine (anhydro-orthosulphaminebenzoic acid, patent No. 6,626, 1885), and neutralising the solution by the addition of the alkaloid of which a compound is desired. The solution so formed yields the compound in an amorphous or crystalline condition on evaporation; but if an excess of saccharine is used, an easily crystallisable acid-salt of the alkaloid is produced, which possesses in a still less degree the characteristic taste of the alkaloid.

## SPECIFICATIONS RECENTLY PUBLISHED.

(Postage, 1d. each extra.)

1885.

- 12,454. A. Jones. Medicating saccharine, &c. substances used as food. 6d.  
 13,099. J. G. Chapman and R. Foote. Generating carbonic acid gas. 8d.  
 13,756. M. Neuhaus. Producing a vacuum. 8d.  
 14,182. S. Austin and S. Sellars. Chemical compound for rheumatism. 4d.  
 14,097. W. and W. A. Whiting. Trusses. 6d.  
 14,364. E. W. Parnell and J. Simpson. Sulphur and sulphuric acid. 6d.  
 14,552. B. H. Thwaite. Preserving food, &c. 8d.  
 14,942. T. Turner. Stoppering bottles. 8d.  
 14,957. C. D. Abel. Separating, &c. fatty matter from compounds containing wool fat. 6d.  
 15,836. N. M. Henderson. Distilling ammonia. 8d.  
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 15,405. H. W. Stevens. Filling bottles with aerated liquids. 8d.  
 15,438. G. Watson. Obtaining baths of chloride of antimony for dyeing, &c. 6d.  
 15,588. M. P. Browne. Administering injections. 8d.  
 15,599. V. Tribouillet and E. Husson. Preserving alimentary substances, &c. 8d.  
 15,664. T. R. Shillito. Separating substances from phosphate of lime. 11d.  
 15,861. J. Deeks. Bottles for aerated liquids. 8d.  
 15,947. F. Candy. Preparing fullers' earth. 6d.  
 15,015. E. Woodham and P. Ockenden. Securing, &c. corks of bottles. 8d.

1886.

46. E. W. Parnell and J. Simpson. Producing pure carbonic acid gas. 8d.  
 596. C. Fahlberg and A. List. Compounds of organic alkaloids and saccharine, &c. 4d.  
 715. W. B. Giles and A. Shearer. Phosphoric acid. 6d.  
 776. J. W. Hall. Stoppers for bottles, &c. 8d.  
 948. A. Borrownicki. Treating phosphoretic slag. 6d.  
 1,113. R. and J. E. Park. Soap. 6d.  
 1,820. L. Cuisinier. Diastasic saccharine substance, &c. 6d.  
 4,682. J. H. Haywood. Surgical elastic hosiery. 4d.  
 7,558. J. C. Hill. Lotion for chilblains and bunions. 4d.  
 7,673. W. Brown. Feeding bottles. 8d.  
 10,798. H. J. P. Sprengel. Producing sulphuric acid. 8d.  
 11,051. T. Mayhew. Receptacle for poisons. 8d.  
 11,206. J. Kehoe. Portable surgical couch. 6d.  
 11,356. O. Imray. Resorcine blue. 6d.  
 11,376. J. Arnold. Enemas and pumps. 6d.  
 11,688. H. Mason. Varnish for boots and shoes. 4d.

## VOID PATENTS.

*The following Patents have become void through non-payment of renewal fees.*

- 3,119. W. W. Bird, jun. Stoppers for bottles.  
 3,194. W. Weldon. Obtaining sulphur from alkali.  
 3,577. A. J. Boulton. Caustic soda, &c.  
 3,609. D. Sidersky and another. Obtaining carbonate of strontia from sugar residues.  
 3,631. W. Morgan-Brown. Amber varnish.  
 3,740. J. C. Mewburn. Chemical products for bleaching, &c.  
 3,750. J. H. Gartrell. Dental plates.  
 3,773. J. Imray. Sulphites, &c.  
 3,789. E. A. Brydges. Oxidising alcohols.



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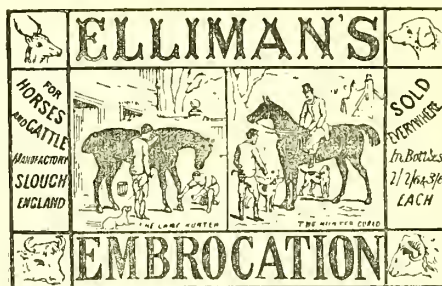
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# EDITORIAL NOTES.

## PRECISE MEDICATION.

INTERVIEW WITH DR. MORTIMER GRANVILLE.

THE days of shot-gun medication are practically in the past, and physicians now endeavour, by the selection of the most approved remedial agents and the administration of these in the simplest form, to reduce therapeutics to an exact science. Complexity in medication is in most cases synonymous with mental fog on the part of the prescriber. It may be in some cases desirable to associate several drugs together, but in these cases it generally happens that one drug modifies a specific action of the other, and so allows the desired action full play. This, therefore, though an example of complexity in administration, is more properly a simplification of the action. No doubt the time will come when therapeutics will have so far advanced that the one-remedy system will be universally recognised.

A new departure in medication was made some years ago in the introduction of remedies so protected superficially that they passed through the stomach unacted upon, until, on reaching the duodenum, the protective coating dissolved and the action of the remedy commenced. This new departure has two important features—first, medicines which produce gastric irritation, or whose action may be destroyed by the gastric juice, may now be given with confidence; and, secondly, it is possible to have the action of certain remedies localised, and to administer others internally as topical remedies. The importance of these functions has been recognised by Dr. Mortimer Granville in his proposed "concentric composite pills," to which we referred last week. One of our staff has since called upon Dr. Granville to learn something more about the pills and their use than was given in the published note, and he was very courteously received. The doctor explained that it was his wish that every pharmacist should know how to make the concentric pills, or any other new form of medication, as there was no reason why there should be specialising in the matter. The great object of the pills, it was explained, is to ensure, as far as possible, the local action of certain drugs. As an example of this we may quote the following prescription of Dr. Granville's of a pill to act upon the liver, the small intestine, and the large intestine successively:—

|                                |               |
|--------------------------------|---------------|
| Barbaloin .. .. .              | gr. xxiv.     |
| Ext. cascarae sagradae .. .. . | .. .. . xxiv. |
| Iridin .. .. .                 | .. .. . xij.  |
| Fiant pilulae duodecim.        |               |



It is evident that, if these pills be made in the ordinary way, the action of the ingredients will begin as soon as the pills are disintegrated in the stomach. This is not in all cases desirable, and as in this case it is desired to have the action of the barbaloin manifested on the large intestine only, means to this end have to be found. Dr. Granville therefore proposes to make the barbaloin first into a mass with a suitable excipient, so that when divided the pills will be as small as possible. Then cover with a rather hard coating of gelatine. When the pills are perfectly dry their average weight is noted. The next step is to roll the pills in the extract of cascara. This, the doctor assures us, is a matter of no difficulty after a little practice, and soon the operator is able to distribute pressure equally and to judge when the pills have taken on two grains of the extract. Here we may state that Dr. Granville is distinctly of opinion that the extract of the British Pharmacopœia is useless, and he advises all practitioners to discard it, and to use the extract made by percolation. After the pills have obtained their coat of extract they are to receive a protective coating of keratin. In all cases two coats of the keratin solution must be given (the second after the first has dried), because the first coat invariably cracks. The keratin, it is well known, is not soluble in the gastric juice, but the coating readily dissolves in alkaline fluids, such as are contained in the duodenum. The next step is to make the iridin into a soft mass with glycerine or tragacanth, and roll the pills in this mass as formerly, then dry and coat with gelatine or varnish. It will be seen that the small quantity of iridin is here presented to the stomach in a very thin layer, which is quickly dissolved, and its action upon the liver is soon apparent. A grain of iridin administered in an ordinary pill may be similarly beneficial, but it is conceivable that in many cases the pill may not be wholly dissolved in the stomach. After the iridin has been removed the pill passes on, and is not acted upon further until it passes the pylorus. Here the keratin coating is dissolved, and the cascara is given off to act upon the small intestine. The barbaloin is not exposed until the pill has been carried low down in the intestine.

Another pill which Dr. Granville uses exemplifies a somewhat different form. It contains oxychloride of bismuth, 1 grain; cotoin, 2 grains; ipecacuanha,  $\frac{1}{2}$  grain; and leptandrin,  $\frac{1}{2}$  grain, and is used to allay intestinal irritation, particularly of the ileum or the glands near the ileo-cæcal valve, and which gives rise to a common form of diarrhoea produced by sewer gas, and prevalent when typhoid fever is in a district. The bismuth oxychloride is first made into a mass with a drop or two of water, coated with gum, and weighed. The bismuth is here ordered as a topical remedy, and for that reason it is made into a mass which will disintegrate easily. Dr. Granville's experience with the oxychloride is that it is a much better salt for administration than the subnitrate of bismuth, especially in such cases as that under notice. The cotoin is next made into a soft mass with syrup, and applied; then the pills are rolled in the ipecacuanha powder before they receive the keratin coating. In this way the ipecacuanha does not cause nausea, which is especially distressing to phthisical patients, and requires the combination with it of opium, which in its turn is objectionable. Lastly, the leptandrin is made into a mass, the pills rolled into it, and finished off as before mentioned. The pills should of course be weighed at the end of each stage, this operation being all the more necessary when quantities of them are made for stock. Any difficulty which may appear to be involved in the process is very soon got over in practice, and we feel sure that pharmacists will be equal to any demand for these pills which may arise. Dr. Granville

makes no secret of the fact that he has started entirely from theory, but his results in practice have been so far highly satisfactory.

### BORACIC ACID AS A PRESERVATIVE.

TEN days ago an animated discussion took place in the *Standard* regarding the use of boracic acid for preserving fish. A similar discussion occurred in Edinburgh at the beginning of this year, when the Scottish herring-fishers discovered that their business was being seriously affected by the Norwegians, who, four years ago, began to use boracic acid as a preservative, and were thereby enabled to send their goods in a fresh state over a long journey into our markets. Moreover, they were able to hold their stock until the markets were favourable, whereas our own fishermen must sell off their catches at once, and, as has been the case for several years, in a very unremunerative market. The manner of preserving adopted by the Norwegians is to besprinkle the herrings layer by layer with a mixture of 2 parts of salt and 1 of boracic acid, about  $2\frac{1}{2}$  lbs. of acid sufficing for a thousand herrings. The process has received the approval of the Scottish Fishery Board, whose scientific adviser is Professor Cossar Ewart, of Edinburgh University. This board has also sanctioned experiments with boracic acid in the direction of ascertaining the minimum amount required for preservation, and the best means which fishermen may adopt for that end.

The discussion in the *Standard* appears to show a weight of testimony from salesmen against the use of the acid. Mr. Joseph Barber, honorary secretary of the National Sea Fisheries Protection Association, states that "it has been fully demonstrated by the experience of the past three years that boracic acid will not keep fish in good condition except by the aid of cold weather, and even then the flavour is greatly deteriorated; so much so, that such fish only find a market in London in the absence of English or Scotch fresh fish, and then the price realised is not more than half what would be paid for fresh uncured fish of similar description."

A Billingsgate firm, while of opinion "that boracic acid will keep herrings for a few days in air-tight barrels, maintains that it is only for a few days, as the numbers condemned by the Fishmongers' Company testify. Their experience is that it is of little value for herrings in the summer, when the fish are fat, and the enormous supplies reduce the price nearly to zero; and in the winter, when herrings are of a dry nature, it appears to take all the scales off the fish, and a lot of the flavour out of them, at the same time rendering them difficult to cure into bloaters or kippers, as they do not 'take the salt' nearly so well as fish without it. This may be because salt has already been applied to them. These statements are naturally of great importance as coming from practical men, but it is noteworthy that on the experimental scale the new process has been highly successful, and failure, if failure has happened in practice, may be due to the neglect of some of the conditions which can be better attended to in experiment. It is generally the case, however, that new methods which have emanated from technical laboratories are not at first received with favour by traders, and we expect that this element of dissatisfaction has weighed somewhat with those who have condemned the use of boracic acid. We learn that Professor Cossar Ewart has lately been making experiments on a large scale with boracic acid and other substances, and that he is now able to keep fish which have previously been treated by a special process perfectly sweet for weeks in a solution which only contains a trace of boracic acid. This



fact is of considerable importance. Hitherto the great objection to the use of the acid has been its supposed physiological action. One who signs himself "A Physician" says on this subject:—"What is implied in curing fish with boracic acid? There is implied the addition of an appreciable quantity of that toxic substance to the daily diet of those who are to consume the barrel of fish. A small quantity of boracic acid now and again will be eliminated by the organs, and no harm done. But a steady diet of boracic acid is a very different matter. Chloride of sodium, or common salt, is in that respect bland and innocuous, because the animal body is saturated with soda, and can easily dispose of it when it enters the system even in considerable quantities. But it is another affair altogether with so closely allied a substance as potash, which has a depressing action when taken for a considerable period, just because it is not so much at home in the organs and tissues." "A Physician," it is quite evident, is not a chemist, and is also imperfectly acquainted with the therapeutic records regarding the acid. These were carefully collated and commented upon by Dr. Matthew Hay, Professor of Toxicology in the Aberdeen University, when it was first proposed to use the acid for fish preservation, and the conclusion which he arrived at was that it is perfectly harmless and not cumulative. Still, although boracic acid is not in the common acceptance of the term toxic, nor related in any way to potash, it is desirable that a minimum amount only should be used for food stuffs. It is evident that the Norwegian plan requires the use of an excessive amount, and for that reason the Scottish Fishery Board have been working in the direction indicated by Professor Ewart's results, which have been referred to. We trust that the result may be beneficial to a hard-working class of the British community, and that fresh fish will be more readily obtainable.

#### ANILINE DYES IN THE EAST.

It is reported in Indian journals that the Shah of Persia has recently decreed that any carpet weaver who is found using aniline dyes shall be punished by having his hands nailed up over his door. This decree points to an evident determination of the Persian ruler to save one of the staple industries of his dominions from ruin through the demand for "cheap and nasty" goods; and if carried into effect it will no doubt put a stop to the importation of aniline dyes in Persia. In British India, also, many voices are raised against the growing employment of aniline dyes as colouring materials, and the Indian Government are urged to take measures which, if less drastic than those resolved upon by the Shah, shall tend in a similar direction. The Indian exchequer is just now in a very unsatisfactory condition, and it is claimed that a heavy import duty on aniline dyes would yield a good revenue, and at the same time encourage the use of the beautiful original indigenous dyes which continue to lose ground. It is stated that the principal authorities on Indian affairs at the recent exhibition were unanimous in their condemnation of aniline dyes, as likely to lead to the ruination of Indian fabrics. But if that be the case, it is strange that all the while, notwithstanding their indignation, they took no notice whatever of the fact that the Benares brocade-weaver employed in the exhibition exclusively used silk steeped in aniline colours. The Poona silk manufacturers also, it is said, use none but aniline dyes now, although in some departments of the Indian Government the employment of these dyes has recently been discouraged. In the presidency of Bombay, for instance, the dyes are no longer allowed to be used in the prisons, where carpets and similar articles are manufactured on a large scale.

#### CORNER FOR STUDENTS.

THIS section of THE CHEMIST AND DRUGGIST was instituted early in 1868, as a means of affording to students a test of their progress in technical studies, more especially as related to pharmaceutical examinations; and since then, and quite independently of all examinations, the Corner has been kept warm by succeeding generations of apprentices and assistants. We may fairly claim that it has done good work in a quiet way.

For the first few years the competition was monthly, and the task set was a number of questions in chemistry, pharmacy, and allied subjects. It was six months after the section was started before prizes were offered, and shortly thereafter practical analysis was added to questions. There were two sections—a senior and a junior—competitors in the latter not taking the analysis, but prizes were awarded to the best man in each. The corner was conducted for two years by the late Mr. John Cargill Brough, F.C.S., but in November, 1869, he handed it over to Mr. R. J. Moss, of Dublin, who had then carried off the first prize on every occasion upon which he competed. Mr. Moss took a great interest in the Corner, and this interest has not flagged during the seventeen years he has conducted it, in spite of the onerous public and professional duties which have grown upon him during that period. The old plan of questions, &c., continued for some years after Mr. Moss assumed charge of the Corner, essays occasionally being also required, but afterwards it was considered more advisable to confine the work to analysis only, and so it has continued to be for more than fifteen years. Inorganic substances have generally been given, but occasionally alkaloids, alloys, and other substances have been sent out, although, on the whole, the most satisfactory results have been obtained in the analysis of inorganic salts. Most of the competitors have been, and still are, provincial students who use the Corner as a means of testing their progress. At the same time metropolitan students have largely availed themselves of the opportunity—indeed, there is a legend current that Bloomsbury Square men who are going in for the Major use our Corner as a "feeler." However this may be, it is a fact that many of the most successful Bloomsbury Square students are numbered in

#### THE ROLL OF HONOUR.

This roll presents the names of all who have up to the present time taken prizes in the competitions. The first prize-winner, we may state, was Mr. W. M. McNaughton, Belfast; then followed Mr. R. J. Moss. It is rather remarkable that the list begins with Irish students, and that so many from the Green Isle occur in it; but it is, no doubt, a gratifying fact to the conductor, and it is to us gratifying that THE CHEMIST AND DRUGGIST is so well appreciated there.

The roll requires no explanation further than that those who took prizes in the junior section are ranked as 2nd, although they were really 1st in their section:—

|   |   |
|---|---|
| Abernethy, J., Belfast, 1874 (2nd), 1875 (1st), 1876 (1st)        | Barfoot, J. R. D., Chesterfield, 1880 (1st)                                   |
| Adair, T. S., Derby, 1885 (1st)                                   | Barkas, T. C., Newcastle-on-Tyne, 1884 (1st)                                  |
| Alcock, F. H., London, 1879 (1st), 1880 (1st), 1881 (2nd and 1st) | Barratt, A. A., Birmingham, 1884 (2nd and 1st), 1885 (1st)                    |
| Ames, J. C., Bristol, 1886 (2nd)                                  | Baxter, W., Bromley, 1884 (2nd, and twice 1st)                                |
| Anderson, D. S., Forfar, 1876 (1st)                               | Bayley A., Lancaster, 1833 (twice 2nd)  |
| Arrowsmith, R., Ecclestone, 1882 (twice 2nd)                      | Beer, W. R., Canterbury, 1885 (2nd)   |
| Asbury, T., Buxton, 1886 (2nd)                                    | Bennet, C. J., Widnes, 1875 (1st), 1876 (2nd), 1877 (2nd), 1878 (2nd and 1st) |
| Ashton, F. W., 1884 (2nd)   | Betts, A. S., Devon, 1870 (2nd)   |
| Atkinson, J. G., Horncastle, 1870 (2nd)                           |   |
| Atkinson, M. C., Manchester, 1871 (2nd), 1872 (twice 2nd)         |   |



|   |  |   |   |
|---|--|---|---|
| Birks, W. C., York, 1879 (2nd), 1880 (twice 1st)                                      | Greig, W., Sunderland, 1868 (2nd) 1869 (1st)   | Mills, C. J., Bristol, 1873 (1st)                             | Summer, B. T., Horneastle, 1868 (twice 1st)                         |
| Bishop, W. B., London, 1873 (2nd)   | Griffin, T., Brighton, 1871 (1st)  | Morrell, A. W., Chesterfield, 1884 (1st), 1885 (2nd)          | Summers, Frank, Bury St. Edmunds, 1876-77 (twice each, 2nd and 1st) |
| Blankley, G. W. Arnold, 1886 (2nd)  | Griffith, R. W., Southampton, 1870-71 (five times 1st), 1872-73 (twice 2nd)                        | Moss, R. J., Dublin, 1868-69 (three times 1st)                | Talbot, W. W., Nottingham, 1882 (1st), 1885 (2nd)                   |
| Bond, F. J., Tiverton, 1872 (twice 1st)   | Gregory, J., Stockton-on-Tees, 1868 (2nd)  | Nicholson, T. G., Diss, 1878 (twice 2nd), 1883 (2nd)          | Tame, T., Trowbridge, 1875 (three times 1st)                        |
| Bradley, J., Bingley, 1871 (2nd)  | Grimwade, E. H., Croydon, 1880 (2nd)   | Nuthall, E., Norwich, 1870 (2nd and 1st)                      | Thirliby, W. A., London, 1874 (2nd)                                 |
| Brown, J. F., Dover, 1869 (1st, and twice 2nd)  | Hall, E. E., Walsall, 1883 (1st)   | Ough, L., Plymouth, 1885 (2nd)                                | Thomas, J. D. D., Bristol, 1869 (2nd)                               |
| Candy, W. G., Bath 1868 (1st)   | Halliday, C. W., Birstall, 1873 (1st)  | Parker, R. H., Barnstaple, 1874 (2nd), 1877 (1st), 1879 (1st) | Thompson, C., Leicester, 1875 (2nd), 1876-77 (twice 1st)            |
| Carter, A. J., Westminster, 1874 (2nd)  | Hart, W., jun., Bolton, 1877 (2nd)   | Paterson, D., Edinburgh, 1871 (2nd)                           | Thresh, J. C., Dnnkinfield, 1873 (1st, and twice 2nd)               |
| Cleaver, E. L., London, 1873 (twice 1st)  | Heath, H., Bandon, 1872 (2nd)  | Pepper, A. J., Barrowden, 1869 (2nd)                          | Todd, M. J., Sunderland, 1876 (2nd)                                 |
| Cox, F. J., Clifton, 1881 (2nd)   | Herbert, A. H., London, 1884 (2nd)   | Phillips, F. L., Birmingham, 1874 (2nd), 1876 (1st)           | Trembath, H., Penzance, 1883 (2nd)                                  |
| Crenset, J. C., Nottingham, 1871 (1st)  | Hogg, A., Boston, 1882 (2nd)   | Pidd, A. J., Hulme, 1872 (2nd)                                | Turney, J. D., Plymouth, 1885 (1st)                                 |
| Cripps, R. A., London, 1883 (1st)   | Hooper, D., London, 1830 (1st, and twice 2nd)  | Plowman, Sidney, London, 1874 (1st)                           | Twenlow, F. E., London, 1875 (2nd)                                  |
| Crogan, W. G., Birmingham, 1870 (2nd)   | Houff, R. W., Sheffield, 1880 (2nd)  | Poole, W., Newcastle, Staffs., 1886 (2nd)                     | Wallis, H. B., London, 1870 (2nd)                                   |
| Croshaw, J. F., Hull, 1881 (1st), 1882 (1st)  | Houlst, J. E., Birmingham, 1877 (2nd)  | Princep, P., London, 1877 (2nd)                               | Want, W. P., London, 1886 (2nd)                                     |
| Davies, R. H., London, 1872 (1st)   | Hoyle, R. A., Preston, 1882 (2nd)  | Randall, P. W., Southampton, 1881 (2nd)                       | Watson, J. H., Halifax, 1870 (2nd)                                  |
| Dobbin, L., Belfast, 1878 (2nd and 1st)   | Hutchinson, J., West Hartlepool, 1883 (1st)  | Rigby, J., Liverpool, 1870 (2nd)                              | Watson, J. P., Devonport, 1883 (1st and 2nd)                        |
| Doran, R. E. Bray, 1884 (2nd)   | Jackson, H. J., Bridlington Quay, 1873-74 (twice 1st), 1875-76 (twice 2nd), 1877 (1st), 1878 (2nd) | Robins, H. H., Cheshire, 1886 (1st)                           | Watt, R., Belfast, 1886 (1st)                                       |
| Dunn, H., Shipley, 1870 (2nd)   | Kendall, J. A., Blyth, 1869 (twice 2nd and three times 1st)  | Robinson, A. E., Birmingham, 1876-77 (twice 2nd)              | Watts, J., jun., Sheffield, 1870 (twice each 1st and 2nd)           |
| Edgill, J., Frimby, 1870 (2nd)  | Kirby, R., Ambleside, 1874 (1st)   | Roper, R. F., 1881 (2nd)                                      | Weltorn, G., Grantham, 1868-69 (twice 1st)                          |
| Edward, W. W., London, 1875 (2nd)   | Laugher, W., West Bromwich, 1870 (2nd), 1873 (2nd)   | Sampson, G., Chesterfield, 1879 (2nd)                         | Werner, E. A., Dublin, 1885 (three times 1st)                       |
| English, T. G., Dublin, 1885 (2nd)  | Lawrie, J., Blackpool, 1882 (2nd)  | Samuel, A. H., Liverpool, 1870 (1st)                          | Weddell, A., Winchester, 1874 (twice 1st)                           |
| Evans, A. J., London, 1880 (2nd)  | MacKay, J. B. L., London, 1881 (1st)   | Selkirk, J., Edinburgh, 1869 (2nd)                            | Weddell, W. H., Stamford, 1868-69 (1st and twice 2nd)               |
| Evans, J. W., Bridgend, 1868-69 (twice 2nd)   | McNaughton, W. M., Belfast, 1868-69 (twice 1st)  | Shaw, A., Liverpool, 1886 (1st)                               | Williams, E. D., London, 1868 (2nd)                                 |
| Fletcher, A. B., Southampton, 1869 (2nd)  | Manlove, R. J., Slough, 1871 (2nd)   | Shenstone, W. A., London, 1872 (1st)                          | Williams, F., jun., Bath, 1875 (2nd)                                |
| Fletcher, F. W., Southampton, 1870 (Latin), 1871 (2nd and 1st)                        | Marson, W., Stafford, 1877 (1st), 1878 (2nd)   | Sieberg, H., Glasgow, 1878-79 (2nd, and three times 1st)      | Williams, G., Birmingham, 1882-83 (2nd, and three times 1st)        |
| Fowler, W., London, 1882 (1st)  | Marson, C. D., Stafford, 1884-85 (twice 1st)   | Smith, J. W., Halifax, 1870-71 (twice 1st), 1872 (2nd)        | Wilson, T., Leeds, 1869 (twice 2nd)                                 |
| Fraser, A., Liverpool, 1869-70 (three times 1st)                                      | Maybury, A. C., London, 1870 (twice 1st)   | Sowdon, W. J. J., London, 1872 (1st)                          | Wood, W., Birstall, 1884 (2nd)                                      |
| Fraser, J., Edinburgh, 1879 (1st)   | Miller, C. B., London, 1879 (2nd), 1881 (1st)  | Spencer, J., Bury, 1872 (1st)                                 | Wright, R., Buxton, 1879-82 (twice 2nd, four times 1st)             |
| Gilson, C. B., Margate, 1886 (2nd, and twice 1st)                                     | Miller, E. F., Ipswich, 1885 (2nd)   | Standen, P., Ironville, 1875 (1st)                            | Young, J., Leicester, 1869 (1st and 2nd)                            |
| Graham, N. W., Dalbeattie, 1871 (2nd)   | Miller, W., Somerset, 1882 (1st)   | Stanswell, L., London, 1879-80 (1st, and twice 2nd)           | Young, F. W., Dundee, 1873 (2nd), 1874 (1st)                        |
| Giant, Donald, Belfast, &c., 1875 (2nd), 1876-8 (three times 1st), 1881-2 (twice 2nd) |  | Stevenson, D. A., 1874 (2nd)                                  |   |
|   |  | Stewart, W., Belfast, 1882 (1st)                              |   |
|   |  | Strond, W., Bristol, 1878 (1st)                               |   |

It cannot fail to strike one reading this list that many of the prize-takers have since made a name for themselves in pharmacy or chemical science. This we take as the best proof of the utility of the Corner, and as the best encouragement for all young men to take part in the competitions. We notice many names of Fellows of the Chemical Society in the list, and several Pereira medallists. There is Mr. Alcock, now of Birmingham, who has both these distinctions; Mr. J. F. Brown, of Dover, a well-known pharmacist, and a frequent contributor to pharmaceutical literature; Mr. E. L. Cleaver, F.C.S.; Mr. R. A. Cripps, a Bell scholar; Mr. R. H. Davies, also an old scholar, now superintendent of the Apothecaries Hall, London, who has done much good work in pharmaceutical chemistry; Mr. Leonard Dobbin, now a Ph.D., a Fellow of several learned societies, and assistant to the Professor of Chemistry in the Edinburgh University; Mr. F. W. Fletcher, who has since added much to pharmaceutical literature, and is now practically engaged in the manufacture of chemicals on a large scale; Mr. David Hooper, a Pereira medallist, and now Government quinologist at Ootacamund; Mr. J. B. L. Mackay, who was the best student of his year at Bloomsbury Square, and is now a teacher of Chemistry at Melbourne; Mr. R. H. Parker, another able investigator; Mr. Princep, lately Secretary to the British Pharmaceutical Conference; Mr. Sidney Plowman, one of the most distinguished pharmaceutical students of his day, long Examiner

in Chemistry to the Pharmaceutical Society, now an F.R.C.S., but still one of the best known men in pharmaceutical circles; Mr. A. E. Robinson, a well-known chemist in his neighbourhood and far around it, who has done excellent original work; Mr. W. A. Shenstone, at one time assistant to Professor Attfield, now lecturer on chemistry at Clifton College, and a writer of books; Mr. Charles Thompson, the popular secretary to the Pharmaceutical Conference at Birmingham; Mr. J. C. Thresh, a Doctor of Science, Examiner in Chemistry to the Pharmaceutical Society, who has made some of the most notable researches of any pharmacist of the present time; Mr. R. Wright, an old assistant of Dr. Thresh's, who has, since he was a competitor, written several able papers on pharmaceutical subjects; and Mr. F. W. Young, F.R.S.E., now teacher of science to the High School, Dundee, who has done excellent service to chemistry as a teacher under the South Kensington scheme. Such is the record of a few only of our prize-takers.

It is but just to say that such men would not have wasted time with the Corner if they did not find it useful; nor was it the mere fact of gaining a prize which induced them to enter. The experience was a solid gain. Students will see for themselves the importance of the course. They are sufficiently alive to their own interests to take advantage of it, and there must be a goodly number who would wish to have their name upon the roll. The only way to attain this distinction is to try for it.



**Sozolic Acid.** This new antiseptic is more strictly named orthoxyphenyl-sulphurous acid. In composition it is parallel to salicylic acid, containing, however, the group sulphuryl ( $\text{SO}_2$ ) in place of the carbonyl ( $\text{CO}$ ) of salicylic acid. It is a reddish syrupy liquid, of sp. gr. 1.40, with a feeble and not disagreeable odour. It dissolves in water in all proportions, congeals at  $8^\circ$ , and distils at  $130^\circ$ . With ferric chloride it gives the same violet coloration as salicylic acid. Though a decided acid, it has not the corrosive action of phenol. It is said to arrest absolutely every fermentation, diastatic or fungoid to a much greater degree than phenol and other well-known antiseptics. It has been recommended for photographic purposes, especially for mounting-pastes. The advantages of sozolic acid lie chiefly in its great solubility and freedom from odour—qualities which, together with the absence of corrosive action, should make it suitable for toilet preparations, such as mouth washes.

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**Manufacture of Sodium.** Mr. H. Castner, of New York, has succeeded in effecting an important improvement in the manufacture of sodium and other alkaline metals which is likely to greatly reduce their present high price. He proceeds on practically the same principle which is at present followed, but instead of using ordinary charcoal, he uses a carbide of iron, prepared by mixing reduced iron with tar and coking this mixture. The coke which is produced contains 70 per cent. of iron and 30 per cent. of carbon, so that the mixture may be represented as  $\text{FeC}_2$ . In practice 15 lbs. of the mixture in fine powder are added to 100 lbs. of caustic soda. Fusion and reduction are conducted in cast-iron crucibles (the old method requires malleable iron) and specially conducted furnaces, in which the covers for the crucibles are fixed; these covers are provided with exit tubes for the volatilised metal. The charged crucible is mechanically raised into the furnace, which is heated by gas, and at  $1,000^\circ \text{C}$ . reduction is complete. Mr. Castner claims that this process has the following advantages. As the charge is fused, the alkali and reducing material are in direct contact, and this, together with the aid rendered by the fine iron in withdrawing the oxygen from the soda, ensures that reduction takes place at a moderate temperature. Moreover by reducing the metal from a fused mass, in which the reducing agent remains in suspension, the operation can be carried on in crucibles of large diameter, the reduction taking place at the edges of the mass, where the heat is greatest, and the charge flows in that direction to take the place of that reduced. By the old process, only about 30 per cent. of the theoretical yield was obtained, whereas by the new one as much as 90 per cent. is procurable.

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**Fatal Dose of Cocaine.** A tragic occurrence is reported from St. Petersburg to the *Pharmaceutische Zeitung*. About a fortnight ago a lady patient came to Professor Kolemnnin suffering from a complaint which necessitated a painful operation. The professor decided to make use of cocaine as an anesthetic, for the first time within his practice. He was guided in the administration of the drug by information obtained from French medical journals. Accordingly he administered by the mouth 24 grains of cocaine in solution, and informed his students that French doctors habitually prescribe twice this dose, without the slightest ill effects on the patients. The operation was successfully performed, but a short time after the patient had been put to bed serious symptoms appeared, and death ensued within two hours. Professor Kolemnnin immediately acknowledged that death was due to poisoning by cocaine, but the occurrence affected him so much that he shortly afterwards committed suicide by blowing his brains out. It is thought that the cocaine used by French doctors is generally very much adulterated, while in Russia the law against adulterated drugs is very rigorously enforced, and that thus the dose which Professor Kolemnnin administered on the strength of French reports proved fatal to his patient. This conjecture regarding the purity of the cocaine used in France appears to us to be far-fetched, and it is more likely that a mistake has been made regarding the dose generally administered.

#### Railway Rates.

In the discussion on boracic acid as a fish preservative, elsewhere referred to, it is very plainly stated that the new method of preservation is not the only advantage which Norwegian fishermen have over our own. It appears that the railway companies in this country charge such heavy rates that the competition cannot possibly go on much longer. For example, Norwegians and Swedes send their fish into our markets at 15s. per ton, while our railway companies are charging 75s. per ton for bringing similar fish from the North of England and Scotland to the same market. The carriage is, in fact, equal to from 60 to 70 per cent. of the wholesale market value. One correspondent states that he recently received two consignments of fish from Hull—one a barrel of Norway herrings, weighing 2 cwt. 2 qrs., carriage 1s. 11d.; another was a skit of English finnies, weighing 1 cwt., carriage 1s. 7d. One barrel of herrings of the same weight from Lowestoft to Sheffield would cost 6s. 4d., whilst from Girvan the same barrel would cost 8s. 2d.

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**The Cobra Bite.** Recently, says *Nature*, the taxidermist of the Victoria Museum, in Jaffna, Ceylon, while feeding a cobra which he had supposed was harmless from previous extraction of the poison-bag, was suddenly bitten by it on the hand. For a few minutes he took no notice, thinking the bite harmless, but pain and nausea soon began. Carbolic acid was applied, ligatures were bound round the arm, an incision was made at the bite, and the blood of the arm was wholly removed. Various antidotes were used, but the unfortunate man lost the power of speech, and soon after every muscle seemed to have become paralysed, and breathing entirely ceased. Artificial respiration was therefore resorted to, and this operation was unceasingly continued for nine hours, when at last the patient made an attempt to breathe, and soon regained consciousness enough to make his wants known. He steadily improved until the Friday, the accident having taken place on a Wednesday, and then astonished those around him by stating that during the severe operation of Wednesday night he was conscious of all that was taking place, but was unable to make his feelings known, not having power over a single muscle. It would seem that the poison paralysed the nerves of motion, but not those of feeling, for he could see, and hear, and feel, although the physicians, even by touching the eyeball, could get no response either of feeling or consciousness. His partial recovery was, however, followed by a high fever and inflammation of the lungs, and he died, perfectly conscious, on the following Sunday.

THE PHARMACEUTICAL CHEMISTS IN HAVANA are complaining bitterly of a new regulation of the Spanish military authorities ordering the pharmaceutical department to arrange to supply all military men and their families with medicines of all kinds at cost price.—*Lancet*.

THE RUSSIAN GOVERNMENT, in their anxiety to discourage the use of patent medicines among its subjects, have prohibited the importation of all patent medicines patented abroad. It appears, however, that the Russian public still continue to demand the patents, for we read in the *Pharmaceutisch Weekblad voor Nederland* that a Moscow firm are now addressing letters to patentees on the Continent, asking the price of the recipes of the preparations, with a view, no doubt, to manufacture the articles in Russia.

THE QUEBEC PHARMACY LAW.—In the Supreme Court of the Province of Quebec, on November 9, the Association Pharmaceutique de Quebec v. Brunet was heard. The action was taken against Brunet for having practised as druggist without a licence. It appears that for some five years he practised as druggist at St. Sauveur, Quebec, in partnership with his brother, a licensed druggist, and after the death of the latter he continued to practise on his own account. The respondent alleged that he exercised the profession of druggist for five years before the coming into force of the Act affecting his case, and that he produced before the registrar of the Pharmaceutical Association proof of the same. He therefore held that the appellants were compelled to enter his name as a licentiate of pharmacy. Judgment was reserved.



## Miscellanea.

**PEROXIDE OF HYDROGEN** has emerged from its fashionable employment as a hair dye into the more useful application for bleaching feathers and tussah silks, for which it is admirably adapted.

ON the authority of Dr. v. Hösslin, a German physician, it is stated that the taste of iodide of potassium is concealed by dissolving it in water, and charging it with carbonic acid gas.

A **PILL OR CAPSULE** containing one grain of inspissated ox-gall and one drop of oil of gautheria is the latest remedy for sick headache. A dose is given every hour until six doses have been taken, or relief is felt.

A **CURIOUS POISONING CASE** has been recorded. A young man recently used an aniline pencil to pick his teeth, and a piece of the pigment breaking off was accidentally swallowed, the result being that he had a severe attack of diarrhoea and vomiting, from which he only recovered after several days, and even then was very weak.

**STARCH GLOSS.**—An American contemporary gravely informs a correspondent that "the fine polish obtained by laundrymen on linen is produced by adding gelatine to the starch. The best proportions can be found by experiment, but probably one part of gelatine to four of starch would be about right." For the benefit of the linen it would, perhaps, be as well to omit the starch and the ironing.

A **PATENT** has been taken out in Germany for an apparatus producing artificial fog, which surrounds plants and protects them against frost. The apparatus consists of a mercury-tube which, upon a fall in temperature and consequent displacement of its centre of gravity, puts into action a contrivance which ignites a vapour-producing compound. An artificial fog is produced by this compound which, rising, protects the plant against the inclemency of the weather.

HAS **QUININE** ever killed anybody? It would be interesting to learn of a case of serious danger resulting from an overdose, for quinine substitutes are now and again causing unanticipated results. A practitioner in Lausanne had a phthisical patient under his charge, who died from swallowing half a bottleful of a mixture which contained 24 grains of antipyrin, and another had a patient who became comatose, and so remained for three days, after taking 3 grammes of the remedy.

**CASTOR OIL** is the subject of a curious mistake in the second supplement of Watts's dictionary, page 270, which is pointed out by Mr. W. H. Deering in the *Chemical News*. It is stated that "10-per-cent. solutions of pure Italian and Ostend castor oil, &c." It was Popp who made the original statement, and Mr. Deering suggests that the contraction "Ostind" (Ostindich = East Indian) has been transcribed incorrectly. Of course "Ostend" castor oil is quite unknown in the market.

**PRESERVING FLUID.**—At the recent meeting of medical men in Berlin Professor Grawitz exhibited pathological specimens, which were preserved in a fluid composed of 150 grammes of sodium chloride, 20 grammes of saltpetre, to 1 litre of water; to this is added 3 per cent. of boracic acid or tartaric acid. It is stated that in this fluid specimens retain their colour, size, &c., remarkably well; at the same time the solution is much cheaper than any hitherto proposed.

**NICKEL-PLATED VESSELS** were a few years ago introduced, and were greatly recommended for cooking purposes owing to the comparative insolubility of the coating in very dilute acids. How far success has attended their introduction may be judged from the fact that an order has been issued in Lower Austria forbidding manufacturers and tradesmen to sell such vessels for cooking. Vinegar and similar substances, it would appear, dissolve the nickel, and this in doses of the fraction of a grain produces vomiting and other poisonous symptoms.

AN **INTERESTING EXPERIMENT** was some time ago devised by Professor Tilden's young colleague, Dr. W. W. J. Nicol, which may be taken as a proof of his theory that the water

of crystallisation of a salt when in solution is indistinguishable from the rest of the water of the solution. He took ordinary crystallised hyposulphite of sodium, and fusing it carefully, so as to prevent any loss of water, found that after cooling the salt did not solidify; in other words, a solution was formed of anhydrous hyposulphite of sodium in the water which previously was associated with it as water of crystallisation.

**GERMANIUM**, the new element whose discovery by Dr. Cl. Winkler we reported on March 6, has since then been subjected to prolonged examination by its discoverer. He finds that its atomic weight is not 72.75, as first announced, but 72.32; thus bringing agreement with Mendeljeff's ekasilicium even more close. This determination was made with the chloride  $\text{GeCl}_3$ . In addition to the other particulars which we have previously given, it may be stated that the metal fuses at  $900^\circ \text{C}$ ., and at a somewhat higher temperature appears to sublime. Its density is 5.469 at  $20.4^\circ \text{C}$ .; its specific heat, 0.0758; and atomic heat, 5.48. Its combinations have previously been referred to, but here it may be restated that it forms two series of salts, in which it exists in the dyad and tetrad condition.

**STAINING PROTOPLASM.**—Some time ago Dr. Bödecker, of New York, found that the protoplasm situated between the prisms of the teeth could be satisfactorily stained by means of chloride of gold. Mr. A. S. Underwood has communicated the results of experiments with the method to the Odontological Society, confirming Dr. Bödecker's observations, and suggesting a modification in the process. He first immerses the section for an hour in a solution of sodium carbonate, then for another hour in a neutral solution of chloride of gold, which must be done in a dark room. It is again immersed for a few minutes in the soda solution, and then in a warm bath of 1 per cent. formic acid solution for an hour and a half, after which the section may be mounted in glycerine jelly. The sections may first be decalcified with chromic acid, but so prepared they take longer to stain than when prepared as above. In either way, however, instead of days as formerly the process can be performed in a few hours.

**THE MEEM TREE** which yields margosa bark is the *Melia azadiracta*, and is known to the Mohamedans as the "tree of virtue," in reference to its many healing and medicinal properties. The *Indian Agriculturist* states that "it is an unfailing cure of *bursati* in horses; an ointment made by frying the bruised green leaves in mustard-oil and beeswax will heal almost any malignant sore or ulcer, as we can testify from personal experience in the treatment of five 'Delhi' sores which had resisted every other treatment. An infusion of the leaves in boiling water will allay almost any swelling of the joints or any other part, while internally it acts as a tonic and alterative. The leaves are used to protect clothes from the attacks of insects, and for bugs; and white ants, which infest rose bushes, are got rid of by burning some of the leaves round the stems. The wonder is that some enterprising Holloway or Jacob Townsend has not awakened to the wonderful properties of this 'tree of virtues,' and turned it to some profitable account."

**WHAT IS SOLUTION?**—This is a question which vexes the souls of our best chemists, and formed the basis of an interesting discussion at the Birmingham meeting of the British Association. Speaking of the solubility of chemical salts, Professor Tilden said: "What determines the solubility of a substance? Why, for example, is magnesium sulphate very soluble in water, whilst barium sulphate is almost totally insoluble? With regard to salts the following propositions seem to be true:—(1) Nearly all salts which contain water of crystallisation are soluble in water, and for the most part easily soluble. (2) Insoluble salts are almost always destitute of water of crystallisation, and rarely contain the elements of water. (3) In a series of salts containing nearly-allied metals the solubility and capacity for uniting with water of crystallisation generally diminish as the atomic weight increases. The fusibility of a substance has also much to do with its solubility. Neither fusibility alone nor chemical constitution alone seems to be sufficient to determine whether a solid shall be soluble or not, but it may be taken as a rule to which there are no exceptions that when there is a close connection in chemical constitution between a liquid and a solid, and the solid is at the same time easily fusible, it will also be easily soluble in that liquid."



## FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

**CHEVREUL'S MEDAL.**—M. de Quatrefages has presented to the Academy of Sciences a medal struck in honour of M. Chevreul by the committee of the Société de la Jeunesse française. The medal is the work of M. Roty, one of the most eminent Parisian engravers. Thirty only have been made of the larger model presented to the Academy, but a number of the smaller model have been struck for distribution among the subscribers to the Chevreul centenary fund.

**ACADEMICAL ELECTION.**—At the meeting of December 6, the Academy of Sciences selected two names for the succession of the late M. Bouley. They are, first in order, M. Chauveau, and second, M. Gréhaut, from which the Minister is to choose the new academician. But it is well understood that to be first on the list presented to the Minister is equivalent to an election.

**THE ALCOHOLISATION OF WINES.**—After a protracted discussion, lasting several sittings, the Academy of Medicine finally adopted, on November 30, the following conclusions:—The Academy, from a hygienic point of view, declares (1) That the alcoholisation of wines by means of pure alcohol, and in a proportion not exceeding 2 per cent., may be tolerated. But outside of these conditions it must be absolutely forbidden; (2) that alcoholisation is dangerous, not only owing to the quantity or bad quality of the alcohol introduced into wines, but also because it permits watering, which is both a fraud and a sophistication; (3) as the alcohols called higher alcohols considerably increase the dangers of brandies and liquors, there is good ground for insisting upon the complete purity of the spirit used for manufacturing such products; (4) the Academy calls the attention of the public authorities to the necessity of decreasing the number of drinking-places, regulating their traffic, and strictly enforcing the laws against drunkenness.

**MANGANESE AS A PHOSPHORESCENT AGENT IN MINERALS.**—In a memoir read on December 6 before the Academy of Sciences, M. Becquerel came to the conclusion that the phosphorescence observed in some specimens of limestones is due to the presence of manganese. Having noticed, for instance, that Iceland spar is phosphorescent, he proceeded to the analysis of this substance, and found it to contain manganese. Then, experimenting with carbonate of lime, chemically pure, he tested it with the phosphoscope, and found it almost inactive. When, however, small quantities of manganese are added to the liquors from which carbonate of lime is precipitated, an active phosphorescent compound is obtained. This phenomenon he considers due to a molecular change adduced in the precipitated carbonate by the presence of manganese.

**FATAL RESULT OF VITRIOL-THROWING.**—Last month a woman named Belligand, said to be a midwife, threw vitriol at M. Courty, an architect, as he was stepping into his house in Rue Gay-Lussac. So large was the quantity of the acid that two young women, then passing, were dangerously injured by the scattered liquid, while a young man, also a passer-by, was slightly, but disagreeably, besprinkled. On December 2 M. Courty died after horrible sufferings. At the Morgue, on being confronted with the body of her victim, the woman burst into sobs, and professed to be very penitent. The tragic result of a forsaken woman's revenge is causing no little excitement, and may have the effect of teaching juries to henceforth reflect on the dangers of mistaken leniency for such offenders. It calls attention also to the necessity of restricting the sale of corrosive liquids. Pharmacists, of course, will not sell a drop of sulphuric acid without a prescription; but what is the use of such caution when any revengeful Ariadne can for a few sous get a bowl of oil of vitriol from the nearest paint-dealer?

**THE QUININE MANUFACTURER AND THE CHEMISTS.**—At the last meeting of the Paris Pharmaceutical Society some interesting facts transpired near the close of the sitting which the lateness of the hour caused to be omitted from the account of the proceedings. In his committee report, M. Marty had come to the conclusion that the Codex assay process for quinine was sufficient, provided the temperature of

the maceration water be specified to be 60° C. (140° Fahr.). But M. Ferrand related a fact which had just occurred at the Pharmacie Centrale. It appears a lot of quinine sulphate (from a manufacturer not named) had been received, and, as usual, submitted to the chemist for examination. He applied the modified Kerner's test, not taking particular care of the initial temperature of the maceration water, but being very careful to have the mixture kept at 15° C. (59° Fahr.) for the requisite time before filtering and adding the ammonia. The test having shown the chemical to be deficient in purity, the manufacturer was notified. But he replied his quinine did answer the test with maceration water at 60°, and offered to prove it to the customer's satisfaction. He accordingly came to the laboratory and macerated his sulphate in water carefully kept in a drying oven at 60°, and then showed that the chemical stood the ammonia test. Next, the same quinine was assayed by the new chromate test recommended by Dr. de Vrij, and found to contain some 6 per cent. of foreign alkaloids, a result agreeing with the conclusions arrived at by the chemist. Hence, said M. Ferrand, manufacturers have already found a way to circumvent the modified test proposed by the quinine committee of the Pharmaceutical Society, even before the test is formally adopted. The subject is to come up again for discussion at the meeting in January, when a battle-royal may be expected.

**THE FASTING TOURNAMENT.**—On the thirty-ninth day of Merlati's fast, the medical committee, judging science had nothing more to gain from a longer observation, dissolved, and left the performer to the care of his ordinary watching committee. He is described as in the last stages of anemia; yet on December 7, the forty-third day of his fast, he was still holding out; but he announced he would not attempt to go further than the forty-fifth day. Succì means to astonish the natives more and more. On December 3, the fifth day, he took a long tramp in the Bois de Boulogne accompanied by four of his watchers, and led at such a gait that some, in order to keep up with him, had to take coaches, while others followed on horseback. Next he announced that on Monday, he would swallow some deadly poison. A young pig had been procured, and was to take a portion of the dose to show its deadly nature, while Succì would not be inconvenienced. The medical committee having protested against the experiment, Succì at first desisted; but a Parisian paper having dared him, he actually drank on December 7 between fifteen and twenty grammes of laudanum before the phial could be taken away from him. Several hours afterwards the medical committee declared the faster's state to be perfectly normal. As, however, the little pig had been left out of the performance, the poison phial was sealed, and the remaining liquid is to be analysed. If the opium preparation used was Sydenham's laudanum, the one generally employed here, the dose taken would represent from thirty to forty grains of crude opium.

**TRADE WITH BRAZIL.**—It is stated that Brazil has given notice for the expiration of all commercial treaties with European countries which lapse next year. It is intended to conclude treaties of another character.

**WILLS OF MEDICAL MEN.**—The *Lancet* gives the following particulars regarding the estates of medical men recently deceased:—Charles Chadwick, M.D., late of Broadwater Down, Tunbridge Wells, Kent; proved on November 1. Value of the personal estate amounting to upwards of 92,000*l*. Henry Jewell, M.D., formerly of Sidmouth, but lately of Salcombe Regis, Devon; proved at the Exeter district registry on October 18. Value of the personal estate amounting to upwards of 8,000*l*. Francis Falwasser, surgeon-major, Medical Staff Corps, late of the North Camp, Aldershot, Hants; proved on October 27. Value of the personal estate amounting to upwards of 4,000*l*. Robert Fowler, M.D., late of 145 Bishopsgate Street Without, and 12 Old Burlington Street; proved on November 6. Value of the personal estate exceeding 4,000*l*. Harvey Buchanan Holl, M.D.; proved on October 11. Value of the personal estate exceeding 3,700*l*. Walter Somerville, M.D., formerly of Greenfield, county Lanark, N.B., but late of Harrogate; proved on October 26. Value of the personal estate in the United Kingdom amounting to over 2,000*l*.



## TRADE-MARKS APPLIED FOR.

**THE Trade Marks Journal** publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." The address of the Patent Office is Southampton Buildings, London, W.C.

*From the "Trade Marks Journal," December 1, 1886.*

"THE LEICESTER UTILITY COMPANY'S TRIPOLINE"; for polishing pomade, powder, &c., for metals. By The Leicester Utility Company, 10 Yeoman Lane, Leicester. 47,643.

"SHROPSHIRE FRUITINE"; for an aerated non-alcoholic beverage. By Youard & Co. (Lim.), Newport, Shropshire. 48,422.

"LITTHAUER MAGENBITTERS," and figure of a bottle, upon an oblong label; for bitters (alcoholic). By the firm trading as Hantwig Kautowitz, Posen, Germany. 53,342.

"STONECROP"; for a vegetable substance to prevent incrustation in boilers, &c. By R. W. Mayou, Shobnall Road, Burton-on-Trent. 53,625.

"GOSSAGE'S AMBER SOAP"; for common and perfumed soap (53,930-1). "National" and "Empress"; for chemical substances, and for medicated soap (54,787-90). "Viceroy"; for chemical substances, for agricultural, &c., and pharmaceutical uses (54,791-2). Figure of a ship's wheel; for chemical substances, medicated soap, candles, common soap, &c., and perfumery, including common soap, &c. (54,793-6). By William Gossage & Sons, Widnes and Liverpool.

"GOLDEN GLYCERINE," and other wording, upon an oblong plain label, with depositor's signature across it; for a medicinal preparation for the skin. By E. Davison, 299 Holloway Road, London, N. 54,386.

"OVENSTONE QUININE BISCUIT," upon the figure of a biscuit; for medicated biscuit and biscuits. By William James Ovenstone, 21 Drompton Road, Knightsbridge, London. 54,528-9.

"LADY ST. JOHN'S SAMARITAN SALVE"; for a salve for wounds and skin diseases. By J. J. Queenby, 324 Wandsworth Road, London, S.W. 54,620.

"EUPHERGMA," and other wording; for a preparation for the moustache (54,844), and "Oileteau," and other wording, on a label; for a preparation for the hair (54,845). By J. K. M. Hardie, 4 Comrie Street, Crief, N.B.

"THE UNION," upon a three-panelled label; for dry soap, and other goods of Class 47. By George Whipple, Watergate House, Grantham. 55,382.

Landscape picture, with statue, figure, and fountain, as prominent features of foreground; for fermented liquors and spirits (55,388), and for mineral and aerated waters (55,556). "Hay's Hop Ale Essence"; for a spirit or alcoholic essence (56,109). By William Hay, 4 Regent's Terrace, Hull.

"LAWSON'S CLEANSER," on a label; for soaps and washing compounds. By Lawson, Phillips & Billings, Marsh Soap Works, Bristol. 55,606.

Figure of a top, with "Tip-top" upon it; for candles, common soap, illuminating and other oils, laundry requisites, &c. By D. Houldsworth & Son, Springfield Chemical Works, Heckmondwike, Yorks. 55,731.

A portrait, and the words "Firth's Green Healing Salve" (latter on small label). By S. J. Last (trading as Henry Firth), 78 Tithebarn Street, Liverpool. 55,751.

"AGNINE," and the depositor's surname, upon an engraved band; for ointments for human use, cerates for medicinal use by man, and the fat from sheeps' wool made ready for medicinal use by man. By T. Metcalf & Co., 39 Tremont Street, Boston, Mass., U.S.A. 55,754.

"EARL'S FLUID PEPSINE"; for pepsine, being a chemical substance prepared for use in medicine and pharmacy. By Edward H. Earl, Georgina E. Earl, & Emily J. Earl (trading as P. W. Earl & Co.), 40 Westland Row, Dublin. 55,776.

"LUND'S BRONKO," on a label, the word "Bronko" being in duplicate arranged like a St. Andrew's Cross, with the letter "N" in centre; for a medicine for human use. By W. J. Lund, 51 Penny Street, Lancaster. 55,861.

"ANGELL'S FOOD"; for milk food. By R. Sumner & Co., 50A Lord Street, Liverpool. 56,000.

"PARVULES"; for pills for human use. By Wm. R. Warner & Co., 1228 Market Street, Philadelphia, Pa., U.S.A. 56,111.

"THE LAUNDRESS'S FRIEND," upon figure of a packet; for a washing-powder. By F. S. Newall (trading as the Washington Chemical Company), Washington, Station R.S.O., Durham. 56,185.

"DAVIES' SHROPSHIRE SPICE CONDIMENT," and heraldic design, on a round label. By T. W. Davies, Adeote, near Baschurch, Salop. 56,224.

"VAUXHALL"; for common and perfumed soap. By Tyson, Richmond & Jones, 6 Blackstock Street, Liverpool. 56,302-3.

"WHEELER'S GLYCERINE JELLY," and other wording, upon a label. By C. Wheeler, 143 Hackney Road, Middlesex. 56,312.

"LULLABY"; for children's soothing-powders. By Charles Hardy, 104 Queen Victoria Street, London. 56,313.

"SIKAR"; for paints, &c. By J. B. Orr & Co. (Lim.), Charlton, London, S.E., and elsewhere. 56,653.

"KARSWOOD BLOOD FOOD FOR ANIMALS"; for cattle-food. By E. G. Hughes, Victoria Street, and elsewhere, Manchester. 56,665.

"YETA," and other wording, upon a shield, as part of a fancy label; for a bread and cake ferment, being of the nature of a baking-powder. By J. B. Bailey, Bore Street, Lichfield. 56,668.

"CRESCENT"; for blacklead, leather dressings, metal and furniture polishes, cement, fire-lighters, &c. By J. H. Pett (trading as Cornish Manufacturing Company), Redruth, Cornwall. 56,689.

"FLORADOR"; for perfumery. By James Williamsou, 144 Church Road, Hove, Brighton. 56,773.

"TRI-DIGESTIVE," and signature of the depositors; for medicinal preparations. By Symes & Co., 14 Hardman Street, Liverpool. 56,788.

"LAXABREAD"; for medicated biscuits. By J. R. Adamson, 25 Warwick Lane, London. 56,913.

*From the "Trade Marks Journal," December 8, 1886.*

"ANCHOR"; for chemical substances used for veterinary purposes. By W. R. Clarke (trading as W. G. Clarke & Son), Limehouse, London.

"REVALESCIERE," and other wording, with landscape view; for a farinaceous food. By Du Barry & Co. (Limited), 77 Regent Street, London, W., and elsewhere. 53,215.

"CALIFORNIAN," and figure of a crystal; for detergents. By J. Ascongh, Handsworth, Birmingham. 53,238.

Figure of Phenix over a crucible; for philosophical instruments. By Webster's Patent Aluminium Crown Metal Company (Limited), 34 Leadenhall Street, London. 53,305.

"GUMOLINE," within a link border; for gum prepared for use as an article of stationery. By J. J. Allen, George Street, Halifax. 53,903.

"J. FRY & SONS," "FRY," and "FRY & SONS"; for chocolate, cocoa, and all mixtures manufactured therefrom (53,936-8). "Fry's Caracas Cocoa," and other wording, on nine-panelled label; for cocoa (53,940). By J. S. Fry & Sons, Union Street, Bristol, and elsewhere.

"COTHAY'S 'U. P.' BAKING POWDER," and other wording, on label of peculiar design; for baking powder. By J. W. Cothay, 19 Vicarage Terrace, Chester Road, Sunderland. 54,207.

"INVINCIBLE"; for candles, common soap, &c. By Hodgson & Simpson, Calder Soap Works, Wakefield. 54,317.

"STANDARD" and "MARLBOROUGH," each within herring-bone design; for brushes. By G. B. Kent & Sons, 11 Great Marlborough Street, London, W. 54,375-6.

"FARMER'S 504 TONIC," and other wording, on label; for a medicine for human use. By A. C. Farmer, 108 London Road, Scarborough. 54,468.

"HUBBOCK'S PURE OXYDE OF ZINC, PATENT, LONDON," in stencilled letters, arranged in a circle; for a chemical substance. By Thomas Hubcock & Son, 24 Lime Street, London. 55,146.

"ELECTRIC," upon figure of electric cross, and other wording, all on a label; for yeast. By C. Blackmore (trading as the West of England Yeast Company), 31 Stapleton Road, Bristol. 55,233.

Figure of sponge-fisher's boat; for sponges. By Randall Cresswell & Co. (trading as R. Cresswell & Co.), 32 Red Lion Square, W.C. 55,259.

"COQUELUCHE," and other wording, and figure of bottle, with wording thereon; for a chemical substance used as medicine. By J. H. Skinner and H. S. Kingston, East Dereham, trading as the Coqueluche Company there. 55,325.

"MUNARD'S LINIMENT," and portrait, on label; for a liniment for horses and cattle. By W. J. Nelson, Bridgewater, Nova Scotia. 55,643.

"FECUNDATOR," and figure of sunflowers, on a heart-shaped design, with other wording; for a chemical manure. By Thomas Plester, 51 Parade, Lordship Lane, Forest Hill, Surrey. 55,750.



"MAJOLICA SOAP"; for toilet soap. By F. Wheen (trading as Richard Wheen & Sons), Deptford Creek, S.E. 55,775.

"THE PEDESTRIAN'S FRIEND," and figure of two feet, on a label; for a powder for perspiring and tender feet. By W. Burton, 61 Melbourne Street, Birmingham. 55,873.

"NICOSINE," on figure of a leaf; for a medicinal preparation for outward application. By W. H. Bainbridge & Co., South Castle Street, Liverpool. 55,903.

"ISLAND WATERS"; for aerated waters. By J. Gould & Co., Newport, Isle of Wight. 55,912.

Portrait of John Kyrie, the man of Ross; for medicines. By Thomas Matthews, Ross, Herefordshire. 55,993.

"DISTILLED EXTRACT OF WITCH HAZEL," and other wording, and "Compound Syrup of Hypophosphites," and other wording, on fancy labels; for medicinal preparations. By Lorimer & Co., Hargrave Park Road, London, N. 56,289-90.

"ROCKINGHAM DRY SOAP," other wording and design, on label; for dry soap. By Gray, Smith & Bennitt, Wath-upon-Deane. 56,311.

"ROSMAINE," other wording, and figure of rosemary, on label; for a hair-restorer. By Rosmarine Manufacturing Company, 54 Stamford Street, Blackfriars, S.E. 56,340.

"THE CONTINENTAL POLISH REVIVER," and signature; for the same (56,342). "The Milanese Relish," and signature; for a relish; heraldic design (shield on circle); for perfumery (57,090-1); and "The Bulgarian Hair Liquid," and signature; for a hair restorer (56,832). By Maria Louisa Scotti, 38 Keppel Street, Russell Square, London.

"CENTRIFUGAL SOAP"; for soaps. By J. Sinclair, 65 Southwark Street, Surrey. 56,409.

"ELECTRIC AMALGAM"; for a dentist's amalgam. By Crawford & Co., 10 Newman Street, Oxford Street, W. 56,485.

"THE FORTRESS" (56,527) and "The Monarch" (56,741); for soda-water machines and all other machines for filling and syringing aerated waters. By Bratby & Hinchliffe, Sandford Street, Ancoats, Manchester.

"LEVURE DORÉE"; for yeast. By J. Watson & Co., 61 Union Street, Southwark, Surrey, 56,538.

"STONEFERRY," diagonally on a shield; for paints, varnishes, &c. By Hanger, Watson & Harris, Stoneferry, Hull. 56,594.

Heraldic design and wording; for aerated waters. By Maskell & Son, 5 St. Peter's Street, Maidstone. 56,538.

Figure of a bull, and the words "Bull Brand"; for deodorisers and disinfectants, including manganate of soda and chloride of lime, and for detergents. By the Widnes Alkali Company (Limited), Widnes. 56,737-8.

Four castles within a square, and the same between "Mill Bay"; for common soap (56,821-2); same for perfumed soaps (56,825-7). By the Mill Bay Soap, Alkali, and Soda Company (Limited), Mill Bay, Plymouth.

"SOUTH AFRICAN ANTI-ASTHMATIC PAPER," and signature; for the same. By R. W. Walden, 63 Elizabeth Street, Eaton Square, London. 56,984.

## THE REDWOOD TESTIMONIAL FUND.

### SECOND LIST OF SUBSCRIPTIONS.

We are requested to remind pharmacists that it is intended to close the subscription list to this Fund on the 31st inst.

|                              | £ | s. | d. |                          | £ | s. | d. |   | £ | s. | d. |
|------------------------------|---|----|----|--------------------------|---|----|----|---|---|----|----|
| Alecock, F. H. .. .. .       | 1 | 1  | 0  | Macdermott .. .. .       | 0 | 10 | 0  | Colledge, William, Geelong .. ..                | 0 | 5  | 0  |
| Allen, H. .. .. .            | 1 | 0  | 0  | Macintosh, A. .. .. .    | 1 | 1  | 0  | Cooper, F. H., Geelong .. .. .                  | 0 | 5  | 0  |
| Arkininstall, W. .. .. .     | 1 | 1  | 0  | Mathews, H. .. .. .      | 1 | 1  | 0  | Dalton, S. M., Prahan .. .. .                   | 0 | 10 | 6  |
| Atkinson, J. G. .. .. .      | 1 | 0  | 0  | Mayger, W. D. .. .. .    | 0 | 10 | 6  | Dorinaldi, H. A., Prahan .. .. .                | 0 | 10 | 6  |
| Barker, M. M. .. .. .        | 1 | 1  | 0  | Mee, George .. .. .      | 3 | 3  | 0  | Duerdin, John R., Melbourne .. ..               | 0 | 10 | 6  |
| Barton, C. .. .. .           | 0 | 10 | 6  | Morson, T. .. .. .       | 3 | 3  | 0  | Evans, J. D., Collingwood .. .. .               | 0 | 10 | 6  |
| Baxter, W., jun. .. .. .     | 0 | 5  | 0  | Müller, Dr. Hugo .. .. . | 3 | 3  | 0  | Fowler, Alex. R., Launceston (Tasmania) .. .. . | 1 | 1  | 0  |
| Bishop, Thos. .. .. .        | 1 | 1  | 0  | Nesbit, J. .. .. .       | 2 | 2  | 0  | Francis, Henry, Melbourne .. .. .               | 0 | 10 | 6  |
| Bowden, T. L. .. .. .        | 0 | 2  | 6  | Nichol, A. .. .. .       | 0 | 10 | 6  | Francis, Rawson Parke, Melbourne ..             | 0 | 10 | 6  |
| Brown, E. .. .. .            | 0 | 5  | 0  | Oldfield, H. .. .. .     | 0 | 5  | 0  | Fullwood, R. J., Melbourne .. ..                | 0 | 10 | 6  |
| Burroughs, Welleome & Co. .. | 4 | 4  | 0  | Palmer, F. .. .. .       | 1 | 1  | 0  | Gabriel, R. .. .. .                             | 0 | 2  | 6  |
| Caldecott, C. G. .. .. .     | 0 | 5  | 0  | Parker, R. H. .. .. .    | 1 | 1  | 0  | Gamble, Henry, Prahan .. .. .                   | 0 | 10 | 6  |
| Chambers, J. H. .. .. .      | 2 | 2  | 0  | Pharmacist .. .. .       | 1 | 1  | 0  | Grimwade, F. S., Melbourne .. ..                | 0 | 10 | 6  |
| Chaplin, J. H. .. .. .       | 0 | 5  | 0  | Pigott, Saml. .. .. .    | 0 | 5  | 0  | Guthell, Herman, Melbourne .. ..                | 0 | 10 | 6  |
| Chapman, H. .. .. .          | 0 | 10 | 6  | Potts, Robert .. .. .    | 0 | 10 | 6  | Harrison, Christopher, Prahan .. ..             | 0 | 10 | 6  |
| Clarke, T. M. .. .. .        | 2 | 2  | 0  | Pumphrey, A. .. .. .     | 0 | 5  | 0  | Hirst, Charles C., West Melbourne ..            | 0 | 10 | 6  |
| Cooper, A. .. .. .           | 2 | 2  | 0  | Purdue, T. .. .. .       | 0 | 5  | 0  | Hooper, E. G., Melbourne .. .. .                | 0 | 10 | 6  |
| Corder, W. S. .. .. .        | 0 | 10 | 6  | Quain, Dr. .. .. .       | 5 | 5  | 0  | Huntsman, T., Fitzroy .. .. .                   | 0 | 10 | 6  |
| Crow, W. E. .. .. .          | 1 | 1  | 0  | Radermacher, C. J. .. .. | 0 | 10 | 6  | Johnson, William, Windsor .. ..                 | 0 | 10 | 6  |
| Darby, S. .. .. .            | 5 | 0  | 0  | Rait, R. C. .. .. .      | 0 | 5  | 0  | Kingsland, Geo., Melbourne .. ..                | 0 | 10 | 6  |
| Davis, D. F. .. .. .         | 0 | 5  | 0  | Richardson, A. .. .. .   | 0 | 5  | 0  | Lacey, James, Melbourne .. .. .                 | 0 | 10 | 6  |
| Davis, R. H. .. .. .         | 0 | 10 | 6  | Rees, W. H. .. .. .      | 1 | 1  | 0  | Longstaff, Thomas, Ballarat .. ..               | 0 | 10 | 6  |
| Doughty, E. T. .. .. .       | 1 | 1  | 0  | Rowntree, Thomas .. ..   | 1 | 1  | 0  | Mackay, J. B. L., Melbourne .. ..               | 0 | 10 | 6  |
| Duberley, G. S. .. .. .      | 0 | 10 | 6  | Rowson, H. .. .. .       | 0 | 10 | 6  | Marston, C. .. .. .                             | 1 | 1  | 0  |
| Eastes, E. J. .. .. .        | 0 | 10 | 6  | Smith, W. F. .. .. .     | 0 | 10 | 6  | Massina, A. H., Melbourne .. ..                 | 0 | 10 | 6  |
| Elborne, W. .. .. .          | 1 | 1  | 0  | Spencer, Thos. .. .. .   | 0 | 5  | 0  | Morgan, J. V., Melbourne .. .. .                | 0 | 10 | 6  |
| Elliott, Wm. .. .. .         | 1 | 1  | 0  | Staey, F. .. .. .        | 0 | 10 | 6  | Morrow, George, Geelong .. .. .                 | 0 | 5  | 0  |
| Emson, W. N. .. .. .         | 0 | 5  | 0  | Stuart, C. E. .. .. .    | 0 | 10 | 6  | Naylor, T. H. .. .. .                           | 0 | 10 | 6  |
| Evison, A. .. .. .           | 0 | 2  | 6  | Sammers, J. R. .. .. .   | 1 | 1  | 0  | Nelson, William Y., Prahan .. ..                | 0 | 10 | 6  |
| Foggon, G. .. .. .           | 0 | 5  | 0  | Terry, T. .. .. .        | 0 | 10 | 0  | Nieman, J. H. .. .. .                           | 1 | 1  | 0  |
| Forbes, J. W. .. .. .        | 0 | 5  | 0  | Thomas, H. .. .. .       | 0 | 10 | 6  | Owen, Alfred J., Geelong .. .. .                | 0 | 10 | 6  |
| George, Henry .. .. .        | 0 | 10 | 0  | Thomas, T. Rees .. .. .  | 0 | 5  | 0  | Owen, John, Geelong .. .. .                     | 0 | 10 | 6  |
| Gilmour, A. .. .. .          | 0 | 5  | 0  | Thompson, C. .. .. .     | 0 | 10 | 6  | Palmer, T., Ballarat .. .. .                    | 0 | 10 | 6  |
| Greenish, H. G. .. .. .      | 0 | 1  | 0  | Thompson, G. .. .. .     | 0 | 2  | 6  | Potts, H. W., Melbourne .. .. .                 | 0 | 10 | 6  |
| Groves, R. H. .. .. .        | 1 | 1  | 0  | Thompson, H. A. .. ..    | 2 | 2  | 0  | Pleasance, Chas., Melbourne .. ..               | 0 | 10 | 6  |
| Hairsine, H. S. .. .. .      | 1 | 1  | 0  | Wakeham, C. .. .. .      | 0 | 5  | 0  | Rogers, W. M. .. .. .                           | 0 | 5  | 0  |
| Hardwick, S. .. .. .         | 0 | 10 | 0  | Watts, J. N. .. .. .     | 1 | 1  | 0  | Rowley, Walter M., Melbourne ..                 | 0 | 10 | 6  |
| Harvey, W. R. .. .. .        | 1 | 1  | 0  | Wiggins, H. .. .. .      | 0 | 5  | 0  | Scott, J. W., Ballarat .. .. .                  | 0 | 10 | 6  |
| Havill, Paul W. .. .. .      | 1 | 1  | 0  | Willmott, W. .. .. .     | 1 | 1  | 0  | Shillinglaw, Harry, Melbourne ..                | 0 | 10 | 6  |
| Holmes, A. J. .. .. .        | 0 | 10 | 6  | Wine, J. A. .. .. .      | 0 | 10 | 6  | Smith, John Geo., Carlton .. ..                 | 0 | 10 | 6  |
| Horne, Edward .. .. .        | 5 | 5  | 0  |                          |   |    |    | Strutt, S. S., East Melbourne .. ..             | 0 | 10 | 6  |
| Horsley, T. W. .. .. .       | 0 | 10 | 6  |                          |   |    |    | Swift, George, Melbourne .. .. .                | 0 | 10 | 6  |
| Ive, William .. .. .         | 1 | 1  | 0  |                          |   |    |    | Thomas, J. Turner, Melbourne .. ..              | 0 | 10 | 6  |
| Jackson, Thomas .. .. .      | 5 | 5  | 0  |                          |   |    |    | Thompson, J. D., Melbourne .. ..                | 0 | 10 | 6  |
| James, Morgan W. .. .. .     | 0 | 5  | 0  |                          |   |    |    | Tompsett, H. T., Melbourne .. ..                | 0 | 10 | 6  |
| King, W. .. .. .             | 1 | 1  | 0  |                          |   |    |    | Treen, G. E., South Melbourne .. ..             | 0 | 10 | 6  |
| Lasham, J. W. .. .. .        | 0 | 5  | 0  |                          |   |    |    | Traver, Dr. .. .. .                             | 0 | 5  | 0  |
| Lister, S. .. .. .           | 0 | 5  | 0  |                          |   |    |    | Wallis, C. .. .. .                              | 0 | 10 | 6  |
| Long, Henry .. .. .          | 0 | 10 | 6  |                          |   |    |    | Walton, T. H., Fitzroy .. .. .                  | 0 | 10 | 6  |
| Louncean, F. E. .. .. .      | 0 | 8  | 0  |                          |   |    |    | Wallworth, A., South Melbourne ..               | 0 | 10 | 6  |
| Meggeson & Co. .. .. .       | 2 | 2  | 0  |                          |   |    |    |   |   |    |    |

### From Australia.

|  |   |    |   |
|--|---|----|---|
| Andrews, Albert, Beaufort .. ..        | 0 | 10 | 6 |
| Atkin, Chas. Agor, Hotham .. ..        | 0 | 10 | 6 |
| Baker, Benjamin, Richmond .. ..        | 0 | 10 | 6 |
| Blackett, C. R., Fitzroy .. .. .       | 0 | 10 | 6 |
| Bowen, William, Melbourne .. ..        | 0 | 10 | 6 |
| Brind, Henry, Ballarat .. .. .         | 0 | 10 | 6 |
| Brinsmead, James, St. Kilda .. ..      | 0 | 10 | 6 |
| Chequiddeen, F. P., South Melbourne .. | 0 | 10 | 6 |

**CURE FOR BRUISES.**—A strong infusion of *Capsicum annuum*, mixed with equal bulk of mucilage of acacia and a few drops of glycerine, is said to be an excellent application to bruises and to a stiff neck. Two or three successive coatings, applied with a camel's-hair brush, immediately after the receipt of an injury, will prevent discoloration.

AN alarm for poison receptacles has been patented by Mr. Oscar F. Frost, of Monmouth, Me. It has a clamping plate and loop supporting a bell, which is hung in such way that when the bottle or package to which it is attached is taken in hand an alarm will be rung that will give notice of the dangerous nature of the contents.



## Trade Notes.

BOVRIL.—Under this name Messrs. Spiers & Pond are introducing Johnston's fluid beef as a beverage in all their establishments throughout the kingdom.

MR. J. W. SUTHERLAND, pharmaceutical chemist, lately with Messrs. Baildon & Son, Edinburgh, has bought the business carried on by Mr. Poole, at Dumfries.

MR. EUGENE RIMMEL'S City branch has been transferred from 24 Cornhill to 64 Queen Victoria Street, near the Mansion House.

MR. R. B. SANDILAND, late of Droitwich, has succeeded to the business of Mr. D. F. Davies, Leominster, who is retiring.

MR. CORBETT, Bromsgrove, has purchased the business of Mr. R. B. Sandiland, The Pharmacy, Droitwich, which he intends to carry on as a branch.

MR. A. E. HOBBS, of 72 Northgate Street, Gloucester, has sold his business, through Mr. Brett, of Leicester, to Mr. Fowkes, late of Rhyl.

MR. S. W. MORRIS, of Fore Street, Edmonton, has disposed of his business to Mr. Percy Pearce. W. H. Taylor & Co. acted as agents.

MR. C. KNIGHT, of London, has purchased, through Mr. Brett, of Leicester, the business of Mr. F. G. Forster, of 25 Charlotte Street, Landport.

MR. THOMAS KNIGHT has purchased the retail business of Messrs. Thomas Hopkinson & Co., Wheelergate, Nottingham. That firm, however, still carry on their medical wholesale in the same town.

MESSRS. FELTOE & SONS, proprietors of the Spécialité lime juice, of 27 Albemarle Street, ask us to correct the announcement of their telegraphic address which appears in the DIARY. It should be Feltoe Sons London, not simply Feltoe London.

MR. C. J. WALKER, late of Ramsgate, has purchased the business lately conducted by Mr. H. C. Robinson, at West Green Road, Tottenham, through the agency of Messrs. W. H. Taylor & Co.

In the description of the new premises lately opened by Messrs. B. G. Lennon & Co., at Cape Town, which we published last week, the style of that well-known firm was accidentally printed as B. & G. Lennox & Co. It should have been stated that the parent establishment of the firm was at Port Elizabeth, and that they have a third South African establishment at East London.

THE old-established business of C. H. Warner & Co., 55 Fore Street, E.C., has been sold by the executors of the late Mr. Mead to Mr. H. R. Maynard, formerly of Maynard & Co. (Limited), of Singapore and Penang. Mr. Maynard has refitted the laboratories of the firm, and intends to cultivate especially a trade with the druggists of the Far East, for which his special experience well qualifies him. Mr. G. N. Gibbs represents the firm as town traveller.

MESSRS. DAY & SONS, of Crewe, veterinary medicine manufacturers, some time since announced a 50% prize essay competition on "The Best Means of Improving the Financial Position of Agriculture." They now inform us that thirty-seven essays were sent in, and that the winner is Mr. R. H. Rew, 7 New Road, Oxford; while the second place is taken by Mr. J. H. Tiffen, 4 Grosvenor Terrace, Hull. The two essays are to be published in one volume, at 1s.

## Gazette.

### Scotland.

#### EXAMINATION.

REID, ROBERT, Callander, druggist. To be examined in the Sheriff Court House, Dunblane, December 15, at 12 o'clock. Creditors will meet in the office of J. Wilson & Stirling, 59 St. Vincent Street, Glasgow, December 24, at 12 o'clock.

## MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

HARRIS—SMITH.—On November 10, at St. Mary's Church, Newington, by the Rev. T. Carrington, Mr. Stephen Harris, chemist, High Street, Droitwich, to Miss Jessie Gertrude Smith, of London.

WHARTON—DENTON.—On December 7, at the parish church, Brigg, Lincs., by the Rev. Philip H. Brierley, M.A., John Wharton, chemist, &c., The Pharmacy, Grimsby, to Emily, second daughter of Robert Denton, Esq., of The Brook, Scawby, near Brigg.

## DEATHS.

BAIKIE.—The sudden death is recorded of Mr. Baikie, manager of the establishment of Messrs. Anderson & Adams, Grafton Street, Dublin, from disease of the heart, on the night of December 1. The deceased lived on the premises, and was in apparently good health and spirits, retiring to bed at about 11 P.M., where he was found dead at about 10.30 on the following morning. An inquest was held by Dr. Whyte, city coroner, on the following Saturday morning, and Dr. Webb, having made a post-mortem examination, gave evidence that the deceased had died of disease of the heart. Mr. Baikie was a member of the Pharmaceutical Societies of Great Britain and Ireland, gold medallist of South Kensington, and had been for the past seven years acting as manager for Messrs. Anderson & Adams, by whom he was greatly trusted and respected, possessing the friendship and goodwill of all with whom he came in contact. The deceased leaves a widow and two children. He was thirty-six years of age.

BAKER.—On November 30, at 54 Buxton Road, Stratford, Mr. Edwin Baker, aged 66. He remained at his desk in the warehouse of Messrs. Evans, Lescher & Webb, 60 Bartholomew Close, till the afternoon of November 26, when he was with difficulty persuaded by one of the partners to go home. He was a man of very extensive information on all literary subjects, and, from the length of time he had been in the trade, was familiar with all the old customs and old names and almost forgotten articles which were in vogue fifty years ago. It always seemed a pleasure to him to help others with his varied store of knowledge. He had a perfect recollection of the partners of the drug houses and of the drug brokers who were well known on 'Change about 1845 and thereabouts, but who have since passed away—all of them men of marked characteristics—such as Mr. Charles Davy, Mr. John Evans, Mr. Herring, Mr. Horner, Mr. Meggeson, Mr. Pigeon, Mr. Jenkin, Mr. Merry, and a number of others; the only survivor of that generation known to him being Mr. J. Sidney Lescher.

GALBREATH.—On November 20, Mr. James Lang Galbreath, Paisley, chemist and druggist. Aged 40.

LAWRENCE.—On December 5, after a short but painful illness, Frederick Lawrence, of Kentish Town, pharmaceutical chemist, much lamented. Aged 60.

MACFARLANE.—On November 11, Mr. James Macfarlane, Glasgow, chemist and druggist. Aged 33.

PAM.—On December 3, at Lewes, Sussex, Albert Pam, chemist. Aged 83.

PHILLIPS.—On November 20, Mr. George Septimus Phillips Coventry, chemist and druggist. Aged 55.

WHITE.—On November 17, Mr. John Davies White, Carmarthen, chemist and druggist.

QUICKSILVER PRODUCTION IN TUSCANY.—The two Italian mercury works, Rosselli and Schwarzenberg, situated at the Monte Amiata, south of Siena, yield annually from 7,000 to 8,000 bottles, about two-thirds of this quantity coming to the Rosselli works. The mercury is sent to Mr. Luigi Donegan's depôt in Leghorn, and thence principally to the English market. A little antimony is also produced at the Monte Amiata.



## Trade Report.

*It should always be remembered that prices quoted in this section are as nearly as can be ascertained the lowest that are actually paid for bulk quantities. Considerable allowances have to be added in many cases before ordinary prices can be ascertained, and for many drugs it must be recollected the range of quality is very wide.*

MINCING LANE, December 9.

THE drug sales of to-day were exceptionally heavy, odd lots having been brought out for the last time this year in the hope of finding purchasers, and in many cases sellers were not disappointed. The catalogues were too heavy to be got through in one day. Some large lots were taken out, and the sale of them was postponed until Friday. This was notably the case with senna. In reference to this a little dispute arose towards the close of the sale, which is worthy of record. One firm of brokers, who appear to be a little tardy in showing their drugs, desired to sell a quantity of senna this week, and Mr. Figgis (of Lewis & Peat) proposed that it should be sold on Friday along with some that would be put up by his firm. This was objected to in some quarters, as it was thought the senna had not been sufficiently on show; but, ultimately, Mr. Figgis had his way, and when he announced the decision he remarked that these were not the days when objections should be raised at trivial shortcomings. It should be remembered that there were other drug markets to which merchants could send their goods, and English brokers would have to look alive if they did not wish to see Hamburg and Havre beat them in the race. These remarks were well-timed, and were received with applause by "the room." The market closes with a very firm tone, prices on the whole having been well maintained. Opium has kept its price during the week, and much business has been done. As we write there is every prospect of an advance in morphia salts. Several chemicals are sensibly dearer, notably borax, which is now 30s. for bulk quantities, and may yet go higher.

**ALOE.**—Over a thousand cases of the various varieties were offered, but few of them found purchasers. 5 cases of good *Cape* realised 24s. A small lot of *Socotrine* in monkey-skin, pale and hard, realised 51., and of dark variety in cases 14 sold at from 90s. to 95s. *Curaçao* in gourds (50 sold), good brown colour, at about 50s. There was fair bidding for the drug in cases, some exceptionally good lots being offered and sold at good prices; fine pale liver at 61. 7s. 6d., and other livery kinds at prices down to 41. 17s. 6d. Inferior sorts ranged from 21s. upwards.

**AMMONIACUM.**—All that was offered was partly blocky and dullish. Colour fair. Twenty-three cases sold at 22s. 6d. to 25s. 6d.

**ARGOL.**—Sixty-three bags of *Cape* offered. Of these 58 of fair to good grey sold at from 85s. to 91s.; red at 80s.; and a dusty lot (4 bags) at 55s. Large supplies from the Cape are now being offered and find a quick sale at good prices, viz., from 90s. to 99s. for dusty grey to fine white, and 69s. 6d. to 75s. 6d. for ordinary dusty to good red. From Italy it is reported that there is no demand for argol, and that prices remain unchanged at from 2s. 0½d. to 2s. 2½d. per degree, according to richness.

**ASAFETIDA.**—Ordinary qualities sold at 27s. to 35s.; an inferior lot at 22s.; but the bulk of it was bought in.

**BALSAM PERU.**—Sediment only sold at 3s. 3d. The rest bought in at 4s. 9d. and under.

**BENZOIN.**—There was a good show, including some fine gum. A few cases of fine grey, false packed at corners, sold at 101. 17s. 6d., dull grey seconds at 71., and one lot two-thirds false packed sold at 51. 15s.

**CALUMBA.**—About 270 bags were in sale, and nearly the whole was sold. Fine yellow root, in unbroken pieces, brought 23s.; seconds, 18s.; and damaged lots from 9s. to 13s.

**CANTHARIDES.**—A few cases of *China* sold at 31. 10s. to 41.

**CARDAMOMS.**—The supply, though not large, was in excess of the demand, and many lots were bought in. The best kinds of pale bleached medium sold at 2s. to 2s. 6d.; duller at 1s. to 1s. 6d.; and small or damaged lots at from 6d. to 1s. *Wild* sold fairly well at prices up to 1s. 4d., and good pale seed at 1s. 10d.

**CASCARILLA.**—Ordinary dull thin bark, broken, 30s. 6d. to 37s., and bold white at 60s., the latter excellent for pharmaceutical purposes.

**CINCHONA.**—Fair business was done in flat yellow bark. Good hard of fine colour sold at 2s. 4d., and slightly damaged bark at 1s. 10d. Bark slightly inferior as to colour and size sold at from 8d. to 1s. 6d. Good broken *Lima*, part silvery and mossy, 6d.; same damaged, 4½d. to 5½d. Little business done in *succirubra* at 4d. Mr. Mundt, the Java cinchona planter upon whose alleged authority the statement was recently published that in Java there were now 175,000 acres of cinchona under cultivation, writes to explain that he spoke of 17,500 *bahoes*, or about 25,000 acres, as being the probable present extent of the area under cinchona cultivation in Java. Supposing Mr. Mundt's estimate to be as correct as that of Mr. Sinclair, which we reported in our last issue, this would show that the cinchona plantations of Java exceed in extent those of Ceylon, which it is difficult to believe can be the case.

**COCA LEAVES.**—We hear from Hamburg that the stock of coca leaves on that market has been seriously diminished during the last month, chiefly through the execution of heavy orders from New York. The total sales during November amount to 14½ tons *Bolivian*, 4 tons *Peruvian*, and 10 tons *Trucillo* leaves. The stock remaining on December 1 was 6 tons *Bolivian*, 16½ tons *Peruvian*, and 11 tons *Trucillo* leaves.

**CONDURANGO BARK.**—Stocks have been reduced in consequence of absence of arrivals, the low values ruling lately not leaving a margin to shippers.

**CUBEBS.**—A case of good small berries sold at 101. A consignment of 48 piculs (57 cwt.) is shortly expected at Amsterdam.

**DRAGON'S BLOOD.**—Only one small odd lot of the 21 offered was sold.

**GENTIAN ROOT.**—In Italy there is very little offering, but yet the price shows no improvement.

**HONEY.**—Ten kegs of *Irish*, 50 of *Chilian*, and 8 of *New Zealand* were offered, but did not sell. 247 cases of *Californian* were on sale, and most of it changed hands at fair prices: good white, candied, at 30s., was the highest price; pale kinds fetched from 21s. to 25s. 6d., and the darker varieties 19s. downwards.

**LIQUORICE.**—29 bales of stout thick root from Bassorah, partly broken and rather dark in colour, sold at 8s. 6d. to 9s.

**MUSK** sold at improved prices. The better kinds of pile 1, Tonquin, fetched 80s. to 85s., and another lot of same pile thicker in the skin brought 70s. only. Lower qualities also were little in demand. Good *grain* sold at 54s. to 56s.

**OPIMUM.**—The firmness in this drug has been well maintained through the week, and anticipations of a further advance in the price of morphia salts are freely expressed. Makers at present quote 3s. 9d., but it is said they are not willing to book large orders at this price. The bases for the belief in a high price for opium seem to be rather vague, the most definite statement being the unfailing Smyrna report of deficient autumn sowings. In consequence of this condition of things, it is added, some Turkish firms have been purchasing opium in London. We have not been able to verify that statement. All the same the fact remains that some shrewd firms have been stocking both opium and morphia at current rates.

**ORRIS ROOT.**—Lower prices are quoted in Italy, but notwithstanding this the article remains neglected. White selected Florentine in casks is quoted at 25s.; fine Veronese in bags at 14s. 6d. per cwt.



**NUX VOMICA.**—*Bombay* fine pale sold at 9s. 6d., and good dull sorts at 7s. 6d. *Madras* at the same figure. There was a good supply.

**ESSENTIAL OILS.**—*Citronella*: some holders quote  $\frac{7}{8}$ d. per oz., but others hold at  $\frac{15}{16}$ d. per oz. on the spot. For arrival 60s. per case, c.i.f. terms, would be accepted, but there were no buyers. Fisher's brand is held at  $1\frac{3}{8}$ d. per oz. *Lemongrass* remains quiet at  $1\frac{1}{4}$ d. to  $1\frac{7}{8}$ d. per oz. *Geranium*.—*Algerian* oil sells in a small way at 21s. 9d. to 22s. per lb. *Lavender*.—The French makers are about, we understand, to raise the price from 5s. 10d. to 6s. 2d. per lb. *Neroli* reported scarce in France. *Peppermint*.—American dealer, in sympathy with the improved condition of the New York market. H. G. Hotchkiss brand is quoted at 16s. per lb. 13 cases of *Japan* oil (altogether 229 bottles) sold at 6s. *Pimento*.—30 tins of old brown oil sold at 3s. to 3s. 3d. *Otto of Rose*.—The market is quiet but steady. We hear of some transactions at 25s. per oz.

*Almonds* is still held at 22s. per lb.

**RHUBARB.**—There was little demand for this article, and the prices obtained showed no change.

**SARSAPARILLA.**—The prices obtained in sale to-day were good. For *Honduras* the prices ranged from 1s. 3d. to 1s. 5d.; and *Jamaica*, 1s. 2d. for native red; for grey, done up in bundles, 1s. 4d. to 1s. 7 $\frac{1}{2}$ d.; and grey bearded, good quality, 1s. 9d. to 1s. 10d. A bale "as shown at the Colonial and Indian Exhibition" sold at 1s. 5d.

**CROTON SEEDS.**—Good plump seeds slightly mixed with dark kind sold at 24s. 6d. and 25s.

**SENNA.**—About 150 bales were reserved for sale next day. *Tiny* leaves were sold at good prices, the best obtained being  $7\frac{1}{2}$ d. to  $10\frac{1}{2}$ d. for bold green leaves of good colour; seconds sold at 5d. to  $6\frac{1}{2}$ d.; and a large lot of more or less damaged in euring and transit sold from 3d. to  $6\frac{1}{2}$ d.

**TAMARINDS.**—Business done in sale amounted to 40 barrels at 5s. 9d. to 6s. 6d.

**TONQUIN BEANS.**—1 case *Purá*, part frosty, sold at 1s. 7d., and of *Surinam* three lots were sold, the best, a dark lot, at 1s. 9d.; fair sandy at 1s. 2d., and a bag of split beans at 8d.

**VANILLOES** were in good demand at usual prices. The case of fine long vanilloes sent to the Colinderies by Jules Joly, and described by the auctioneer as the finest that had ever come to London, none being under seven inches long, sold at 32s.

**WAX (BEES).**—A little business was done at easy prices.

**WAX (JAPAN).**—The demand shows no improvement whatever, and many holders would apparently be glad to take 51s. per cwt. for fair hard squares.

**ACIDS.**—Citric is quiet at 1s. 11d., and tartaric steady at 1s. 7d. Carbolic is unusually firm and scarce at the recent advance.

**ARSENIC** is in fair request at unchanged rates, viz., 10l. 15s. to 11l. per ton for powdered white in barrels. It is stated that the recent advance in the article is mainly attributable to the disappearance from the field of competition of a firm who had been instrumental in lowering the price by constantly underselling rival manufacturers. The article is now practically monopolised by a few large makers, who are said to have bought up most of the available stock and to have agreed to maintain the price above a certain point for some months.

**BORAX.**—A further advance to 30s. has been announced.

**COCAINE.**—Holders of muriatic of cocaine seem to be disinclined to part with much of their stock at present rates, and may be meditating an advance.

**GLYCERINE** (Chem. pure 1-260).—From Messrs. Fletcher, Fletcher & Stevenson's report we take the following, which indicates the present position:—"This is almost cent. per cent. higher than the lowest price touched quite recently.

The two largest makers are firm at 85l. per ton. We and other second-hand holders are quitting stocks at some 10l. less for quantity. The position is a firm one, and we think yet higher prices will rule, there having been a very large demand from the States, and the Panama Canal Works having employed great quantities for blasting purposes."

**IODINE** seems firm at  $6\frac{1}{2}$ d. Bromide of potassium is steady at the recent advance.

**CORROSIVE SUBLIMATE** remains at 4d. per lb.

**CITRATE OF MAGNESIA** unchanged, at 1s. 3d. per lb.

**MERCURIAL OINTMENT** still quoted at 1s. 10d. per lb. *Precipitate* still quoted at last month's prices, *red* at 3s. 2d., *white* at 3s. 1d. per lb. *Vermilion* dearer, at 2s. 5d. per lb. Mercurials remain unchanged, being now quoted at 2s. 11d. per lb.

**TARTAR EMETIC** unchanged, at 1s. 5d. per lb.

**QUICKSILVER.**—If a report in the *Chemiker Zeitung* is correct, a considerable increase in the production of Austrian quicksilver may be expected. The Mining Company Littai, in the province of Carinthia, after several years' experiments, have opened a quicksilver layer which is among the richest known in the country. In London the importer's price is still 7l. 5s.; second hands, 7l. 3s.

**QUININE (SULPHATE)** remains quiet at unchanged rates. *Howard's* brand is quoted at 2s. 8d. for bottles, and 2s. 6d. for bulk; *Pelletier's* at 2s. 5d. for bottles; and *German* at 2s. 3d. for bulk. In drug sales 800 oz. German quinine were offered without reserve, and sold: *Auerbach's* at 2s., *Böhringer's* at 2s. 3d. per oz. The tenders for the supply to the Dutch military authorities of 1,000 kilos. (about 35,000 oz.) quinine in four instalments were opened at the Hague on Nov. 30. The contract was given to an Amsterdam firm at the average price of 41.43f. per kilo. (=2s. 0 $\frac{3}{4}$ d. per oz., London terms). Tenders ranged from that price to 49f. per kilo. (=2s. 5d. per oz.).

**SODA.**—*Crystals* alone show any change; they are quoted slightly lower, at 2l. 11s. per ton London, or 2l. 5s. in the Tyne.

**CUTCH.**—In public sale on Tuesday 600 boxes were all bought in, but the position of the article is a very firm one, and a good private business has been done at improved rates, principally for America and the Continent.

**GAMBIER.**—At the end of last week a further slight reduction took place, 20s. 4 $\frac{1}{2}$ d. per cwt. being accepted, and the article remains very quiet at about that quotation for fair block in whole balls. From Singapore it is reported under date of November 8 that the current quality of eube gambier placed on the market was very poor.

**GUM ANIMI.**—In last Thursday's sale 72 cases *Zanzibar* went off quietly, and 30 cases sold at late rates: medium size washed pale and amber, 14l. 12s. 6d. to 14l. 15s.; medium pale and amber mixed, 12l. 10s.; common weak, 10l. 15s.; fine strong amber and reddish, 12l. 5s.; bean and pea, fine pale, 9l. 5s.; good, 7l. 15s. to 8l.; weak, 5l. to 5l. 12s. 6d.; medium red and darkish, 8l. 2s. 6d. to 9l. 15s.; pickings, 5l. 7s. 6d.; siftings, 37s. Fourteen cases *Madagascar* withdrawn.

**SHELLAC.**—A good supply (1,070 chests) was offered in public sale on Tuesday, and the bulk sold at irregular rates, commencing rather lower, but gaining in firmness as the sales proceeded. The following prices were obtained:—Second orange, H octagon, good 51s.; IIB house, good at 49s. to 50s.; TN diamond, 43s. to 50s.; GA diamond, good 49s.; OR diamond, ditto 49s., block 43s.; B diamond and GC diamond, 43s.; KD diamond, 47s. to 48s.; garnet AC, good free, 49s., rising to 51s.; AT, fair free, 46s. to 47s.; button RBBL, first, 60s. to 61s., ditto circle 2, mixed second and third, chiefly unworked Calcutta weights, &c., 46s. to 48s., ditto third, 44s. to 45s. After sale 250 chests TN second orange, for arrival, March-May, sold at 52s., landed terms. In the present unsettled condition of the Indian Exchange, which has somewhat improved this week, little disposition is shown by holders to sell on arrival.



## LAST MONTH'S TRADE STATISTICS.

THE Board of Trade Returns for November show the following figures:—

## Imports.

|                   | November, 1885 | November, 1886 |
|-------------------|----------------|----------------|
| Total value .. .. | £29,743,768    | £33,062,955    |

## Exports.

|  | November, 1885 | November, 1886 |
|--|----------------|----------------|
| Total value .. ..                                  | £16,464,250    | £17,562,632    |
| Foreign and colonial produce (partly estimated) .. | 3,918,589      | 3,869,976      |

Below are the details affecting drugs and chemicals:—

## Imports.

|  | Nov., 1884 | Nov., 1885 | Nov., 1886 |
|--|------------|------------|------------|
| Chemical manufactures—                                 |            |            |            |
| Products (unenumerated) .. value £                     | 114,312    | 112,850    | 93,653     |
| Alkali .. .. cwt.                                      | 7,834      | 4,643      | 6,763      |
| .. .. value £  | 8,165      | 3,827      | 5,644      |
| Brimstone .. .. cwt.                                   | 59,467     | 57,219     | 91,900     |
| .. .. value £  | 15,244     | 14,110     | 21,117     |
| Nitre (nitrate of soda) .. cwt.                        | 220,956    | 248,265    | 78,010     |
| .. .. value £  | 108,202    | 134,721    | 34,935     |
| " (nitrate of potash) .. cwt.                          | 24,234     | 22,566     | 20,300     |
| .. .. value £  | 21,986     | 19,906     | 17,655     |
| Quicksilver .. .. lbs.                                 | 60,000     | 35,554     | 75,300     |
| .. .. value £  | 4,480      | 3,634      | 6,885      |
| Bark, Cinchona .. .. cwt.                              | 8,487      | 12,800     | 10,220     |
| .. .. value £  | 57,171     | 91,340     | 59,819     |
| Gum Arabic .. .. cwt.                                  | 4,256      | 9,139      | 7,128      |
| .. .. value £  | 14,229     | 33,027     | 31,373     |
| Lac, seed, shell, stick, and dye .. cwt.               | 11,507     | 7,236      | 3,781      |
| .. .. value £  | 44,747     | 22,990     | 10,217     |
| Spices—  |            |            |            |
| Cinnamon .. .. lbs.                                    | 345,906    | 181,812    | 381,350    |
| .. .. value £  | 12,398     | 6,820      | 13,207     |
| Ginger .. .. cwt.                                      | 274        | 279        | 2,988      |
| .. .. value £  | 519        | 319        | 2,381      |
| Pepper .. .. lbs.                                      | 4,189,312  | 1,768,767  | 1,799,649  |
| .. .. value £  | 123,006    | 57,277     | 63,878     |
| Dyes and tanning materials—                            |            |            |            |
| Bark (for tanners' or dyers' use) cwt.                 | 31,246     | 23,259     | 25,636     |
| .. .. value £  | 15,630     | 7,752      | 9,804      |
| Aniline dyes .. .. cwt.                                | 21,795     | 18,038     | 25,377     |
| Alizarine .. .. cwt.                                   | 18,066     | 29,154     | 19,836     |
| Other coal-tar dyes .. .. cwt.                         | 376        | —          | —          |
| Cochineal .. .. cwt.                                   | 1,218      | 1,808      | 1,975      |
| .. .. value £  | 7,403      | 10,980     | 12,633     |
| Cutch and gambier .. .. tons                           | 1,777      | 1,360      | 2,601      |
| .. .. value £  | 37,713     | 31,412     | 57,725     |
| Indigo .. .. cwt.                                      | 1,329      | 3,789      | 2,123      |
| .. .. value £  | 34,593     | 69,447     | 45,488     |
| Madder, madder root, garancine, and munjeet .. .. cwt. | 1,963      | 2,471      | 856        |
| .. .. value £  | 2,672      | 3,612      | 1,072      |
| Valonia .. .. tons                                     | 676        | 1,621      | 1,800      |
| .. .. value £  | 10,383     | 25,868     | 26,238     |
| Oils—  |            |            |            |
| Cocoa-nut .. .. cwt.                                   | 38,878     | 8,808      | 23,579     |
| .. .. value £  | 62,435     | 12,513     | 31,611     |
| Olive .. .. tons                                       | 769        | 1,461      | 1,306      |
| .. .. value £  | 32,824     | 58,960     | 48,468     |
| Palm .. .. cwt.  | 72,211     | 84,212     | 80,737     |
| .. .. value £  | 110,926    | 93,452     | 84,840     |
| Petroleum .. .. gals.                                  | 4,781,374  | 7,442,816  | 8,278,727  |
| .. .. value £  | 14,060     | 229,232    | 239,247    |
| Seed, of all kinds .. .. tons                          | 1,370      | 1,562      | 1,395      |
| .. .. value £  | 41,448     | 43,261     | 3,162      |
| Train, blubber, and sperm .. tons                      | 1,918      | 1,501      | 1,187      |
| .. .. value £  | 55,860     | 41,927     | 25,323     |
| Turpentine .. .. cwt.                                  | 27,834     | 30,444     | 41,941     |
| .. .. value £  | 32,083     | 40,460     | 54,551     |

## Exports.

|   | Nov., 1884 | Nov., 1885 | Nov., 1886 |
|---|------------|------------|------------|
| British and Irish produce—                                |            |            |            |
| Alkali .. .. cwt.   | 525,661    | 579,160    | 552,584    |
| .. .. value £   | 168,801    | 168,839    | 160,447    |
| Bleaching materials .. .. cwt.                            | 159,835    | 127,071    | 145,143    |
| .. .. value £   | 61,013     | 41,889     | 49,950     |
| Drugs and medicinal preparations .. .. cwt.               | 72,808     | 78,343     | 64,991     |
| Oil (seed) .. .. gals.                                    | 886,701    | 1,410,800  | 1,549,600  |
| .. .. value £   | 83,977     | 130,174    | 130,889    |
| Soap .. .. cwt.   | 41,928     | 30,291     | 37,787     |
| .. .. value £   | 46,442     | 35,485     | 39,720     |
| Painters' colours and materials (unenumerated) .. value £ | 91,199     | 95,163     | 105,049    |

## Exports—continued.

|                                   | Nov., 1884 | Nov., 1885 | Nov., 1886 |
|-----------------------------------|------------|------------|------------|
| Foreign and Colonial merchandise— |            |            |            |
| Bark, Cinchona .. .. cwt.         | 10,027     | 10,102     | 10,063     |
| .. .. value £                     | 48,185     | 62,281     | 38,310     |
| Chemicals (unenumerated) .. cwt.  | 14,447     | 17,886     | 10,523     |
| Cochineal .. .. cwt.              | 758        | 1,217      | 1,341      |
| .. .. value £                     | 4,961      | 8,253      | 9,462      |
| Cutch and gambier .. .. tons      | 779        | 1,212      | 839        |
| Gum Arabic .. .. value £          | 18,004     | 28,330     | 20,593     |
| .. .. cwt.                        | 3,414      | 4,325      | 4,115      |
| .. .. value £                     | 12,136     | 18,497     | 20,150     |
| Indigo .. .. cwt.                 | 3,282      | 3,381      | 3,052      |
| .. .. value £                     | 65,036     | 71,472     | 61,544     |
| Lac, various kinds .. .. cwt.     | 7,475      | 5,588      | 4,522      |
| .. .. value £                     | 25,016     | 17,958     | 12,754     |
| Oils, cocoa-nut .. .. cwt.        | 11,706     | 3,947      | 12,178     |
| .. .. value £                     | 18,669     | 5,895      | 18,130     |
| " olive .. .. tons                | 145        | 188        | 144        |
| .. .. value £                     | 7,156      | 9,957      | 5,880      |
| " palm .. .. cwt.                 | 24,805     | 28,510     | 50,676     |
| .. .. value £                     | 39,219     | 36,383     | 49,275     |
| " petroleum .. .. gals.           | 40,102     | 45,023     | 51,071     |
| .. .. value £                     | 1,565      | 1,785      | 2,176      |
| Quicksilver .. .. lbs.            | 325,084    | 145,696    | 243,284    |
| .. .. value £                     | 24,100     | 11,405     | 23,256     |
| Nitre (nitrate of potash) .. cwt. | 2,135      | 5,719      | 389        |
| .. .. value £                     | 1,923      | 4,646      | 348        |
| Spices, cinnamon .. .. lbs.       | 179,700    | 143,032    | 107,284    |
| .. .. value £                     | 8,337      | 5,282      | 4,137      |
| " pepper .. .. lbs.               | 2,508,094  | 2,426,016  | 1,616,967  |
| .. .. value £                     | 76,226     | 76,849     | 56,973     |

ANISEED continues to be in brisk demand, and in the absence of Mediterranean seed, the *Russian* quality is mostly treated upon; 24s. to 25s. per cwt. are ruling prices. *Alicante* fetches as much as 55s. per cwt. In drug sale some China star anise was offered. The quality was very inferior, and it should be noted that the parcel was imported from Japan, although it had the odour of the true Chinese anise.

CANARYSEED.—An active export trade has taken place during the last fortnight, and prices have tended upwards. Both here and at Liverpool 54s. to 55s. per 464 lbs. has been paid for ordinary *Turkish*, and 57s. for extra clean seed. In Holland there seems to be a good deal offering just now at prices that bear a fair comparison with the values of other descriptions of seed. The ordinary *Dutch* seed realised up to 55s., the large grained up to 60s. per 464 lbs. *Morocco* seed sold between 54s. and 55s. From *Spain* hardly anything is offering now. From New York it is reported that the stocks in that city had dwindled down to 7,500 bags, which is an unprecedentedly small figure at this period.

CARAWAYSEED quiet; holders in Holland do not seem inclined to take reduced prices, and on this side only the smallest retail demand comes forward. 36s. per cwt. is the established value for good *Dutch* seed, and about 28s. for *Russian*.

CUMINSEED remains firm and in small supply. *Malta*, 42s. per cwt.; *Greek*, 26s.; *East Indian*, 28s. per cwt.

FENNELSEED is in very short supply, and small lots of *East Indian* on the spot realised up to 22s. *German* fennel-seed, 28s. per cwt.

FENUGREEKSEED is held for about 8l. to 8l. 10s. per ton.

LINSEED.—The finer qualities are held for a small advance. *Sicilian*, 50s. to 52s.; *Canadian*, 52s. 6d.; *Dutch*, 49s. to 50s.; fine *Bessarabian*, 45s. to 46s.; ordinary *Russian*, 41s., all per 424 lbs. ex warehouse; *East Indian* description somewhat easier; *Bombay*, 42s. 6d.; *Calcutta*, 40s. 6d. per 416 lbs.

MUSTARD SEED—*White* is without any fresh demand; *English*, 10s. to 12s. per bushel; foreign, 8s. to 10s.; *English brown*, 12s. to 13s. per bushel; *Indian brown* seed is quiet at 5s. 6d. per bushel.

COTTONSEED OIL is rather weaker, the following being to-day's quotations:—*Crude*, spot, new, 16l. 2s. 6d. *Refined*, on the spot, 18l. 10s. to 19l. 10s., according to brand and packing. *Hull*, *Crude*, spot, new, 15l.; December–April, 14l. 15s. to 14s. 17s. 6d.





### Memoranda for Correspondents.

*Always send your proper name and address: we do not publish them unless you wish.*

*Write on one side of the paper only; write early; and devote a separate sheet of paper to each query if you ask more than one, or if you are writing about other matters at the same time.*

*If you send us newspapers please mark what you wish us to read.*

*Ask us anything of pharmaceutical interest: we shall do our best to reply.*

*Letters, queries, &c., not noticed in this issue will, if possible, be attended to next week.*

### Pharmaceutical Education in the Provinces.

SIR,—From the numerous private letters received, which I am glad to say are in the main favourable to the educational scheme suggested in my address delivered before the Midland Counties Chemists' Association, and seeing that criticisms have already been made upon it in your columns, I write to ask the indulgence of those gentlemen who have kindly favoured me with their opinions, to allow me to defer replying for a short period.

As the question of pharmaceutical education is of such vital importance to the trade, and it being likely that a Bill will be drafted to enforce a curriculum for pharmaceutical students, I take this opportunity of urging the various local associations to induce one of their members to bring the subject forward at an early date, so that the whole question may be thoroughly discussed and resolutions arrived at which will show clearly the views of provincial chemists as to the lines on which an educational scheme for students should be based. For this purpose I shall be glad to supply copies of the address for the use of the Association.

Yours faithfully,

Birmingham, December 6.

THOS. BARCLAY.

### Chemists and Dentistry.

SIR,—Among the suggestions made by your various correspondents for increasing chemists' incomes there is one omitted which would affect, at any rate, a considerable number. Of the 14,000 registered chemists and druggists a great many are also registered under the Dentists Act of 1878; yet how few of them attempt to take advantage of that fact! Dentistry is a branch which might be pushed and extended considerably, and would pay for pushing. Some will probably say they registered merely to extract teeth, but that it is no reason why they may not aspire to the higher branches. To those I would say, Consult a respectable dentist (London preferred), and ascertain from him amount of fees for lessons in taking impressions, stoppings, &c., and they might arrange with him to do their mechanical work. They would find that a few complete and partial show dentures would be a great attraction, and an investment that would pay well. Those who are not registered would do well to also invest in sets, and arrange with a dentist to send down a qualified assistant to see patients, with whom the chemist might make appointments, upon terms mutually satisfactory. This is not a visionary scheme, as, having myself tested it with success, I speak from personal experience.

Yours truly,

ONE WHO KNOWS. (262/12.)

3/9. *Dentist*.—You cannot properly acquire the knowledge of dentistry which you require from books. You will find in recent numbers of THE CHEMIST AND DRUGGIST advertisements from mechanical dentists who will teach you and put you in the way of doing the business.

### B. P. Corrections.

SIR,—Mr. Adams's parallel columns are interesting as showing how difficult in criticising a work like the B. P. it is to make a hard-and-fast line between "corrections" and "quibbles." With regard to the liq. iodi, I fancy the word "liquor" on page 25 is intended for "linimentum," as in that preparation glycerine is now ordered in the place of camphor in the 1867 B.P. This would be a major correction, I presume. A "minor correction," or "quibble," might be also made in the formula for the new linimentum iodi; thus, after glycerine, for " $\frac{1}{4}$ -oz." read " $\frac{1}{4}$  fluid oz.," and in same line, before "part" read "fluid."

Rock Ferry.

HUGH O. DUTTON.

### The Hop Bitters Prosecution.

SIR,—Really it seems pitiful that such a letter as Mr. Pratt's is possible—that he should be mulcted to the tune of 100l., and connected with a trade society, too, is astonishing. That a man conducting his trade in a usual and distinctly honest manner should be treated exactly as if he were palming his own goods in the place of others deliberately is to me monstrous, and is not improved by the reflection that "it might have been me." Anyway, all the expense in his case ought to be borne by the trade at large, and I beg to suggest that you should receive subscriptions for that purpose, and this quite independently of Mr. Pratt's capability of bearing his expense, as to which, of course, I know nothing.

Yours respectfully,

EX NIHILO, &c. (87/4.)

### The Corner for Students.

SIR,—I am rather surprised to find so-called eminent pharmacists speaking in public in a sneering manner against the several interesting topics you treat your subscribers to; but the recent attack on your "Corner for Students" is the most hurtful of any. I do not mean it will do any harm to your Journal, but to the younger readers, who, if they take the advice given, will lose one of the best means they have of acquiring an accurate knowledge of chemical analysis. I had not the pleasure of reading the remarks made, but fortunately the postman has just delivered an annual report which contains the advice; and it is to counteract its effect that I am going to ask you to publish a list of your prize-winners, and I am sure it will compare very favourably with the list chalked up in Bloomsbury Square; in fact, you will find the same names very often on both lists. I can myself mention a few prizemen of your Corner and metallists of the Society who are now filling important positions in different parts of the world—D. Hooper, J. B. L. Mackay, F. H. Alcock, R. H. Parker, Robert Wright, &c.

Yours truly,

Sunderland.

W. FOWLER.

### Syrup. Hypophosph. Comp.

SIR,—Altering the quantity of strychnine and of potassium hypophos., we have prepared syrup. hypophos. co. strictly according to the formula contained in your Journal last year ever since its publication, and have obtained a fairly satisfactory preparation.

Two faults, however, we have to complain of, viz., that during a fortnight after a batch has been made an abominable smell is developed in the product (a smell resembling a mixture of  $\text{H}_2\text{S}$  and  $\text{PH}_3$ ), and that it deposits slightly. The smell has completely baffled us. We did surmise that the reducing action of the sugar on the  $\text{HPh}_2\text{O}_2$  produced the  $\text{PH}_3$  and the presence of the  $\text{H}_2\text{S}$  was owing to the use of ordinary water, or our quinine not having been washed thoroughly. This, we find, cannot be the case as regards the  $\text{H}_2\text{S}$ , for in the last batch the smell was as bad as ever, after the precipitated quinine had been thoroughly washed and after using only distilled water. Can you help us?

As to the deposit, the composition of which we have not ascertained yet, we find that sometimes it is more abundant than at others, whilst once it was conspicuous by its absence. We enclose a sample of this, which, having had the stopper removed from the bottle, has lost its fragrance.

It is possible that the  $\text{Ca}_2\text{PH}_2\text{O}_2$ , being an unstable salt, may

be the cause of the phosphorus smell, for sometimes we have noticed a faint peculiar odour on opening a stock bottle of it.

Yours faithfully,

CHYMISTS. (3/79.)

SIR,—Mr. Doran is quite right in saying that the formula alluded to is neither a true syrup of the hypophosphites nor a triumph of art. The reason why no calcium salt is ordered is simply because the pyrophosphate would precipitate the calcium. The object of using the pyrophosphate is to give the slightly alkaline reaction, as this salt is, or can be made, slightly alkaline without precipitating the iron. It is, however, possible to obtain a syrup consisting entirely of hypophosphites, and yet turning red litmus blue. It is advisable for pharmacists to produce a preparation possessing the characteristics which medical men (at the request of the proprietor of an excellent article) believe to be necessary to the efficacy of the syrup.

F. J. YEATMAN.

[The formula referred to by "Chymists" is one suggested by Mr. Dobine in a paper communicated to the Maryland Pharmaceutical Association (THE CHEMIST AND DRUGGIST, 1885, page 705). Like several other formulas which have been suggested it errs in providing for a large content of calcium hypophosphite in the finished product. Now there is no syrup of hypophosphites containing calcium quite satisfactory. Sooner or later the lime is thrown out as phosphate, carrying with it something else. If 228 instead of 740 grains of calcium hypophosphite be used, it will be found that the syrup is greatly improved. We are inclined, in the circumstances, to charge the sugar used by "Chymists" as being the origin of the bad odour. If it is "faced," as we suspect it to be, with ultramarine, sulphuretted hydrogen will be given off, and this in the presence of decomposing calcium hypophosphite may give origin to all sorts of phosphorus odours. There is room for some work in connection with hypophosphite syrups. We have received from "R. W." a sample of the syrup referred to by Mr. Yeatman. This syrup is not like Fellows's, being quite opalescent and too distinctly yellow, and we have no hesitation in condemning the formula. The alkalinity referred to is a dubious point; our experience is that what is required is a neutral syrup, and that darkening of vegetable colours is due to the iron hypophosphite.]

#### Butyl Chloral Hydras.

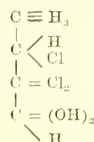
SIR,—Enclosed please find samples of butyl-chloral as requested in your answer to our query November 27, page 720. We may add that, while recognising the different behaviour of the two bodies with the caustic alkalies, we fail to see how it explains the qualitative idea or point of the test, the question being, How far may we expect the normal odour of butyl-chloral to be affected by the presence of chloral hydrate as an impurity? The samples now sent give off more or less the odour of chloroform on the application of the test, particularly if after heating the test-tube is corked and allowed to cool.

Faithfully yours,

Bray, November 30.

A. L. DORAN.

[As we said, allyline dichloride is one of the products of the decomposition of butyl-chloral hydrate by means of an alkali—a formate being the other generally recognised product. But there may be many more. Organic bodies such as this seldom split up clean into two derivatives only, and a glance at the constitutional formula of butyl-chloral hydrate favours this view. It is:—



We have carefully examined the samples sent by Mr. Doran, and find the odour of chloroform quite distinct, as he says, especially if the alkali be applied to an aqueous solution of the butyl-chloral prepared in the cold. Were this due to the presence of chloral hydrate, we would expect to dissolve out this body wholly, and butyl-chloral partially, by treating the sample with less than its own weight of water; and so treating the samples we have failed to get satisfactory indications of the presence of chloral hydrate on evaporation. There

remains, however, the fact that the Pharmacopoeia states that "it does not yield chloroform when heated with solutions of potash or soda"; and in view of this we shall be glad to receive the results of experiments from our readers, so that the matter may be noted, if necessary, in the proper quarter.]

#### Keeping Labels.

SIR,—No doubt Mr. Heder's "Box" trick is the neatest and most cleanly; but when time is money then the "Cox" trick comes in.

Yours, &c.,

F. COX.

SIR,—My plan of keeping labels answers very well; any label can be found in a moment, whereas when they are tied up in paper and named outside without any order or regularity it is a worry to get what you want. I place so many kinds commencing with the same letter (for instance archil, arsenic, aquafortis, antimonial wine—say four kinds) into one of Wright's coal-tar soap boxes, ¼-doz. size, and arrange them alphabetically in some large box, when they are always at hand, are kept perfectly clean, and are no trouble whatever. I have fifty of these boxes laid in rows with 200 kinds of labels.

KNIGHT OF THE PESTLE. (4/31.)

#### Composition Essence.

SIR,—On page 757 of THE CHEMIST AND DRUGGIST you give a formula for composition essence. As this article is freely used by many teetotallers the addition of spirit is scarcely admissible. I would also point out that it can be bought at 1s. or less per lb. and free from spirit—considerably less than the product from your formula, even made in quantity. Perhaps you can state how it can be made without spirit.

Yours,

December 4.

JOHN. (3/21.)

[The essence may also be made by infusion, using about 4 oz. of glycerine to 1 pint for preservation. Many temperance beverages contain alcohol.]

4/47. H. T. asks which is correct:—"One and a half grain" or "One and a half grains."

[Of the two, the former; but "one grain and a half" is a preferable form of expression.]

#### Colouring for Pomades.

Palm oil is not a good colouring for pomade. It is apt to bleach and become sickly in appearance. I think "Apprentice" (Dublin) will find powdered gamboge much more reliable. About 3iij. digested with ol. olive ʒviij. in a water-bath for an hour and then strained out gives a very satisfactory colour to about 1¼ lb. of pomade. The following is a good formula:—

|                |    |    |    |    |    |          |
|----------------|----|----|----|----|----|----------|
| Cerae flav.    | .. | .. | .. | .. | .. | 3j.      |
| Cetacei        | .. | .. | .. | .. | .. | 3j.      |
| Ol. oliv. opt. | .. | .. | .. | .. | .. | lb. j.   |
| Pu. gambog.    | .. | .. | .. | .. | .. | as above |
| Perfume        | .. | .. | .. | .. | .. | q.s.     |

M. S. A.

HEDER. (5/20.)

#### DISPENSING NOTES.

[The opinion of practical readers is invited on subjects discussed under this heading.]

#### A Question of Measurement.

SIR,—On looking over your last issue I see a query put which, as far as my knowledge of dispensing goes, is not answered correctly. The rule I follow, and which is, I believe, the right one, is, where the excess ordered over the size of the standard bottle does not exceed one dose it is not taken into account; but if it should exceed one dose (no matter how little) the ingredients are put in full measure as ordered, e.g. in the case in question. I would have dissolved ammon. bromid., ʒiv., in inf. gent. co., ʒvi., in an 8-oz. bottle, then added syr. chloral hyd., ʒj. But suppose only ʒss. of



the syrup had been ordered, I would have made a mixture  $\frac{3}{4}$  vj. In cases of this kind I usually explain to customers why the bottle is not full, so as to allay suspicion.

Yours truly,  
QUASSIA. (5/11.)

#### The Use of Distilled Water.

SIR,—I believe chemists make it a rule to use distilled water for silver and lead solutions. But are we equally careful to use it for iron solutions? The water of each district may vary in the amount of lime and carbonic acid it contains; therefore, the only safeguard against change is to use good distilled water. "D. T. E.," under "Variable Results," gives aq. destill.; but in answer to "Spem" you say merely aq.

Yours truly,  
HEDER.

[The rule recognised in this column is the pharmacopoeial one:—"In dispensing prescriptions *aqua* should be understood to mean distilled water." The darkening in "D. T. E.'s" prescription takes place in time with distilled water.]

#### Ferri Sulph. Exsiccata in Pills.

SIR,—If your correspondent "Xylem" will make up his pills quickly with mucil. tragacanthæ, P.B., he will find that they will not crack. The hygroscopic nature of glycerine is the secret of the alteration.

HEDER.

16/254. *J. T. Bentley.*—**Lanoline.**—Our experience of this basis is that it requires no addition to bring out its softening properties. It mixes quite readily with nut or other oils, which, however, would render it too soft; and it may be mixed easily with water on an ointment-slab.

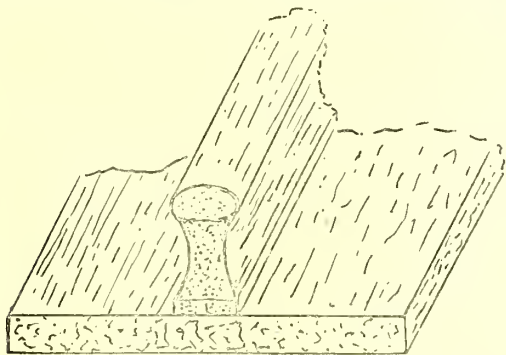
#### The Illegible Prescription.

SIR,—"F. G." suggests that I should say what the prescriber really did mean, but not having the pleasure of his acquaintance I cannot say, so that my opinion is no better than your other correspondents who have attempted the task, for they have had a true copy and a *clean one*, too. I must admit I was greatly assisted in deciphering it by my customer (observing, I suppose, my puzzled look) remarking, "I only require the drops, not the powder." "T. C. E. O.'s" rendering of it is what I made it out to be, and is, I think, correct. I understand the prescriber in practice in Ayrshire, N.B., and the prescription was stamped by a well-known firm in that county.

ORIGINAL CORRESPONDENT.

#### Pill Roller.

The following is a reproduction of a pen-and-ink sketch of a pill roller sent to us by *Chocolate* (59/250). It is intended for rolling 1-grain pill piping on, say, a 3 or 5 grain pill machine. The advantages of the little instrument are ap-



parent. The figure represents a piece of the roller only "*Chocolate*" finds a breadth of 3 inches most suitable, but obviously it can be made any length less than the breadth of the machine. The roller should be made of hard wood—such as walnut—and the handle is securely fixed into the bottom piece with glue.

We shall be glad if others follow "*Chocolate's*" example in making little conveniences of this kind generally known.

#### The Unofficial Remedy.

SIR,—The prescription given by "Subscriber," Nov. 27, was brought to me October 7, last year. As it varies considerably from the above, and was a curiosity in its way, I append a copy. My customer told me that it was a wonderful medicine for general debility:—

|                             |      |
|-----------------------------|------|
| Malva sylvestris .. .. .    | 3ij. |
| Rad. rumicis crisp. .. .. . | 3iv. |

Take of these decoctions (1) 1 oz.

|                               |      |
|-------------------------------|------|
| Tr. Geoffroy. inermis .. .. . | 3vj. |
| Acid. citric. .. .. .         | 3vj. |
| Sp. vin. rect. 56 .. .. .     | 3j.  |

Mix the acid and spirit, add 1 oz. of the decoctions, and tincture 1 oz.; let them stand a few days, and make up to 7 oz. with water. Take a spoonful (!) after every meal.

Yours truly,  
HEDER.

68/255. *Hyoscyamus.*—The formula of unknown ingredients is a very old quack device, and should be exposed by chemists whenever they are asked to dispense such.

#### LEGAL QUERIES.

4/38. *J. C. E.*—You do not give us the details which would enable us to form an opinion. If, as we gather, the right of vending the preparations has been sold to some one else, either by your firm or by your predecessors, it would be obviously unfair and probably illegal to make use of your knowledge of the formulae to oppose the purchaser. If this is not the case we do not see the difficulty.

1/57. *Diploma.*—The Medical Council can only order the erasure of a name from the *Dentists' Register* if the practitioner has been convicted of felony or misdemeanour, or on proof of infamous or disgraceful conduct in a professional respect. They consider each case brought before them on its merits, but they would never, we think, erase a name from the *Register* simply for respectable advertising, although your college might withdraw your diploma.

5/10. *Subscriber.*—**Jury Service.**—The lists of persons qualified to serve on juries are exhibited on church doors on the first three Sundays in September. This is the proper time to make objection if you find your name returned. You can, of course, claim exemption if you are summoned, even though you did not object at the proper time, and a judge or coroner might grant such exemption; but you certainly will be bound to attend before him. Certainly you are liable to be summoned in every parish in which you are a ratepayer.

1/3. *Pil. Aper.*—It would not be legal to announce that a medicine is patented simply because it bears the Government stamp. We do not know of any advantage to be gained by patenting a pill, but we should assume that those proprietors who say their medicines are patented tell the truth. We cannot, however, see what purpose would be served by our investigation of their assertion.

4/62. *Fidelis* asks:—What is the custom of the trade with regard to giving references on assistants leaving situations? Is it general to correspond privately with the future employer of the assistant, or do masters give their employés a written character on their leaving? I myself (he adds) consider the latter plan preferable, as often an assistant is required to give references from his last two, or perhaps three, employers.

[There is no definite "custom of the trade" in the matter; but the plan advocated by our correspondent may be condemned most confidently. An experienced employer would never rely on a character thus given without corroboration, and he ought not to give such. He ought not to be unwilling to give answers to questions in reason, though he may fairly expect applicants to send stamped and addressed envelopes.]

## MISCELLANEOUS INQUIRIES.

22/262. **Hop Tonic.**—*New Subscriber.*

## No. I.

Hop, gentian, dandelion, camomile, stillingia,  
orange peel, of each .. .. . 2 oz.

Macerate for a week in 3 pints of s. v. r. and 4 pints of water. Press, strain, and add 16 oz. syrup.

## No. II.

Tinct. humuli .. .. .  $\frac{1}{2}$  oz.  
" buchu .. .. . 3 drachms  
" senegæ .. .. . 3 "  
Podophyllin (dissolved in s. v. r.) .. ..  $\frac{1}{2}$  drachm  
Tinct. coeci .. .. . q.s.  
Aque ad .. .. .  $\frac{3}{4}$ xx.

*Dose* (of either of the above) : One tablespoonful.

22/262. *New Subscriber.*—**Lime Juice Syrup or Cordial.**—36 lbs. of glucose, 108 lbs. of cane sugar, 28 gallons of water, 17 gallons of Montserrat lime juice, 4 draehms each of oil of orange and oil of nutmeg, and 2 oz. of salicylic acid.

3/31. *Enquirer* (New South Wales).—**Pink Powders.**

Calomel .. .. . 3j.  
Pulv. antimouialis .. .. . 3j.  
Pulv. sacch. alb. .. .. . 3ij.  
Carmine .. .. . q.s.

M. bene.

Or as above, but omit the antimonial powder and add another ounce of sugar. *Dose* : 3 to 6 grains for children of six months to six years.

69/259. *H. D.*—**Wood-stain Polish.**—Linseed oil alone is the usual polish for stained woods. For the stains themselves we have recently published some formulæ.

2/35. *Counter.*—We cannot recommend to you any one book that is expressly suitable for reference for counter practice. The following may be named as useful in different directions :—Quain's "Dictionary of Medicine" (Longmans), 31s. 6d.; Cassell's "Family Physician," 32s.; Begbie's "Medical Information and Advice" (Nelson), 2s. 6d.; Tanner's "Practice of Medicine," 31s. 6d.; "Index of Diseases," 10s. 6d.; "Diseases of Childhood" (Renshaw), 10s. 6d.

4/8. *Chemdrug.*—(1.) Ought glycerine to congeal; if so, at what temperature? [Under certain not well understood conditions glycerine crystallises at about 6° C., especially if a crystal of glycerine be added.]

(2.) Is it necessary that a fancy name trade-mark should be renewed at certain intervals; if so, what are the periods? [Registration of trade-marks is valid for fourteen years, and may be renewed.]

1/68. *S. Evans.*—See page 724 (November 27).

4/6. *Lindum.*—To become a fellow of the Chemical Society you must fill up a form, to be obtained from the Secretary, Burlington House, W., and get at least five fellows to certify by their signatures that you are worthy of the honour. Subsequent procedure is detailed on the application form. The fee for the first year is 6l., afterwards 2l. Most learned societies proceed to the election of fellows in the same manner.

36/258. *J. S.*—The sample of pepsin porci is far below the B.P. standard, and scarcely digests a tenth of its weight of white of egg.

2/16. *A. D.* says he has the same complaint against **Ung Hyd Ox. Rub.** as our correspondent "Locust." He finds that it granulates when made with paraffin according to the B.P. He now makes it with vaseline. He wishes to know why the ointment does not turn blue even when mixed with a steel spatula.

56/261. *H. T. P. B.*—You will find a chart for the detection of the basylous and acidulous radicals in any work on practical chemistry, such as Attfield's, Muter's, Wills's, &c. Griffin's "Chemical Handbook" is published at 4s. 6d.

2/36. *G.*—By "Tic tac trigria" you mean, no doubt, trichophorus (Barry's), which may be got from any patent-medicine house.

1/17. *Inexperienced Apprentice.*—The frost which is used for decoration purposes is glass in thin films.

5/245. *Mel.*—**Uncrystallised Honey.**—The following plan is suggested by Mr. Charles S. Commings, a graduate of the Philadelphia College of Pharmacy :—Suspend the vessel containing the honey in water, apply heat, and stir constantly, until the water is heated to the boiling-point, when the vessel is taken from the fire, the scum removed, and, after cooling, the honey is placed in jars or other suitable vessels tightly covered, and kept in a cool cellar. Treated in this manner, Mr. Commings has kept honey from twelve to sixteen months without crystallising.

**Chrysarobin.**

SIR,—As there is such a great difference between what is sold in the market as Goa Powder or Araroba Powder, and the substance obtained from it after dissolving in benzol and evaporating, it is very desirable that there should be no doubt as to which is to be used when chrysarobin is ordered by a medical man. Goa powder varies in colour from brown to a brownish-yellow, as far as I have seen. From a sample of goa powder of a light brown colour I obtained on evaporating a benzol solution, an orange-coloured crystalline substance equal to about 15 per cent. of the powder operated upon.

Yours truly,

Mussoorie, India, N.W.P., Nov. 15. HENRY GRAHAM.

[This subject was discussed in THE CHEMIST AND DRUGGIST of October 16, and two subsequent issues.]

**Dispensing Prices in South Africa.**

SIR,—In your issue of October 9 I notice a letter from Mr. Shepperson at Kimberley on "Pharmacy in South Africa." As regards Cape Town, the whole is utterly incorrect and misleading. Our dispensing prices are not higher than those charged by the respectable West-end houses. Proprietary articles are only a trifle over English retail prices.

I am, sir, your obedient servant,  
Capetown, November 10. SAMUEL COX.

**Pears' Soap.**

3/3. *W. H. C.*, referring to a recent query, says he read some time back the particulars of a cedar-pencil works, and in the description of the manufacture it said that all the shavings and other refuse of cedar were sold to Messrs. Pears to scent their soap with. The odour of cedar is very marked in their shaving sticks, although perhaps not so pronounced in the tablets. Whether Messrs. Pears obtain the essential oil, or in what way the perfume is extracted, is their secret.

**Information Wanted.**

[Replies to the following requests are solicited by Correspondents of THE CHEMIST AND DRUGGIST.]

41/95. Paper bags. Makers' addresses.

4/12. Vinaigre d'eucalyptus. Maker's address.

54/259. *Apprentice* asks for "an analysis of Jeye's compound disinfectant."



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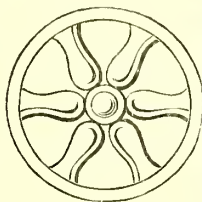
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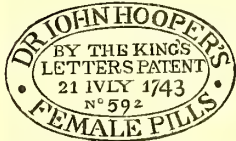
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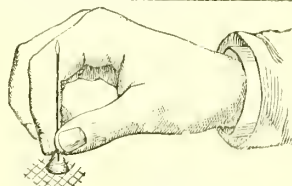
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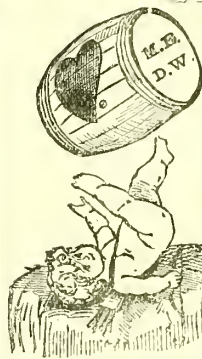
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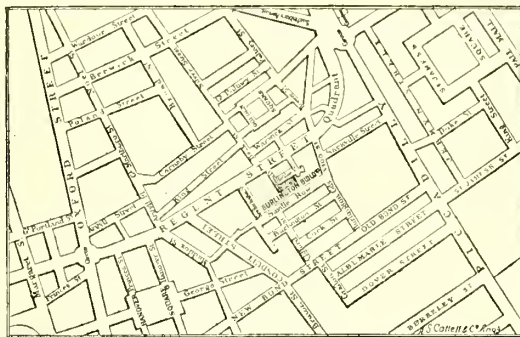
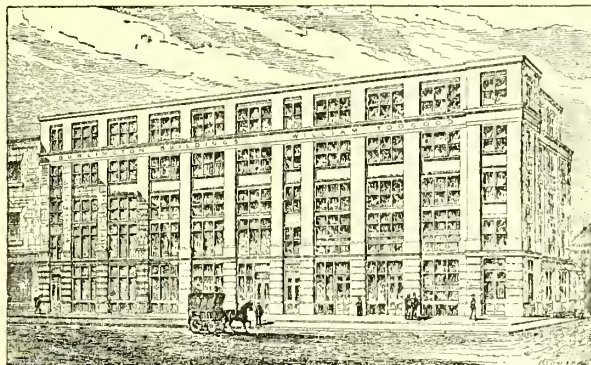
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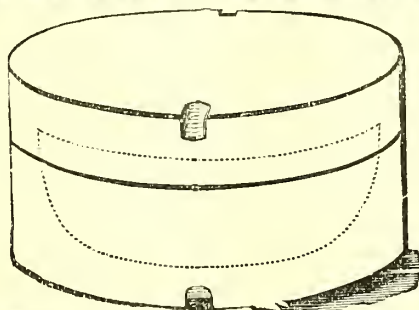
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4th.—Great attention has been paid to insure accuracy of contents.

PRICES, per gross.

| $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{1}{2}$ | $\frac{3}{4}$ | 1     | $1\frac{1}{2}$ oz. |
|---------------|---------------|---------------|---------------|-------|--------------------|
| 18/-          | 18/-          | 18/-          | 20/-          | 22/-  | 24/-               |
| 2             | 3             | 4             | 6             | 8 oz. |                    |
| 27/-          | 34/-          | 42/-          | 54/-          | 66/-  |                    |

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DOZ. BOTTLES  
containing 25 PILLS    containing 100 PILLS

|   | s.        | d.   | s.   | d.   |
|---|-----------|------|------|------|
| Aconitine Crystals (Duquesnel's) .....    | 1-500 gr. | 7 0  | 24 0 | 24 0 |
| " Barb. B.P. ....                         | 1-200 gr. | 7 0  | 24 0 | 24 0 |
| Aloes .....                               | 5 gr.     | 5 0  | 16 0 | 16 0 |
| " Dilute (Hall's Dinner) .....            | 5 gr.     | 5 0  | 16 0 | 16 0 |
| " Sootrine, B.P. ....                     | 5 gr.     | 5 0  | 16 0 | 16 0 |
| " and Asafetida, B.P. ....                | 5 gr.     | 5 0  | 16 0 | 16 0 |
| " and Iron, B.P. ....                     | 5 gr.     | 5 0  | 16 0 | 16 0 |
| " and Myrrh, B.P. ....                    | 3 gr.     | 5 6  | 18 0 | 18 0 |
| " Nux Vomica .....                        | 5 gr.     | 6 0  | 20 0 | 20 0 |
| Aloin .....                               | 1-10 gr.  | 5 0  | 16 0 | 16 0 |
| " .....                                   | 1-4 gr.   | 6 0  | 20 0 | 20 0 |
| " .....                                   | 1-2 gr.   | 7 0  | 24 0 | 24 0 |
| " .....                                   | 1 gr.     | 11 0 | 39 6 | 39 6 |
| " Compound .....                          | 1-2 gr.   | 7 0  | 24 0 | 24 0 |
| " and Strychnine .....                    | 1-2 gr.   | 7 0  | 24 0 | 24 0 |
| " Strychnine and Belladonna .....         | 2 gr.     | 7 0  | 24 0 | 24 0 |
| Anti-Cholera .....                        | 2 gr.     | 7 0  | 24 0 | 24 0 |
| Anti-Dyspepsia (Fothergill's) .....       | 1-20 gr.  | 16 0 | 59 6 | 59 6 |
| Aphrodisiac .....                         | 1-50 gr.  | 5 0  | 16 0 | 16 0 |
| Arsenious Acid .....                      | 1-20 gr.  | 5 0  | 16 0 | 16 0 |
| Asafetida, U.S. ....                      | 5 gr.     | 5 0  | 16 0 | 16 0 |
| " Compound, B.P. ....                     | 5 gr.     | 5 0  | 16 0 | 16 0 |
| Atropine .....                            | 1-300 gr. | 7 0  | 24 0 | 24 0 |
| " .....                                   | 1-100 gr. | 7 0  | 24 0 | 24 0 |
| Blue Mass, B.P. ....                      | 1 gr.     | 5 0  | 16 0 | 16 0 |
| " .....                                   | 2 gr.     | 5 0  | 16 0 | 16 0 |
| " .....                                   | 3 gr.     | 5 0  | 16 0 | 16 0 |
| " .....                                   | 5 gr.     | 5 6  | 18 0 | 18 0 |
| " Colocynth and Hyosecy .....             | 1-10 gr.  | 9 0  | 32 0 | 32 0 |
| Calcium Sulphide .....                    | 1-4 gr.   | 6 0  | 20 0 | 20 0 |
| " .....                                   | 1-2 gr.   | 6 0  | 20 0 | 20 0 |
| " .....                                   | 1 gr.     | 6 0  | 20 0 | 20 0 |
| Calomel, Colocynth, and Hyosecyamus ..... | 5 gr.     | 9 0  | 32 0 | 32 0 |
| " Comp. B.P. ....                         | 5 gr.     | 5 6  | 18 0 | 18 0 |
| " and Opium .....                         | 1-10 gr.  | 5 6  | 18 0 | 18 0 |
| Camphor and Hyosecyamus .....             | 2 gr.     | 11 0 | 39 6 | 39 6 |
| " Mono-Bromated .....                     | 1-4 gr.   | 7 0  | 24 0 | 24 0 |
| Cannabis Indica Extract .....             | 1-2 gr.   | 9 0  | 32 0 | 32 0 |
| " .....                                   | 3 gr.     | 7 0  | 24 0 | 24 0 |
| Cascara Sagrada Extract .....             | 1-2 gr.   | 5 6  | 18 0 | 18 0 |
| Cathartic Compound U.S.P. ....            | 1-2 gr.   | 20 6 | 79 0 | 79 0 |
| Codeine .....                             | 4 gr.     | 8 0  | 28 0 | 28 0 |
| Colocynth Comp. B.P. ....                 | 5 gr.     | 9 0  | 32 0 | 32 0 |
| " .....                                   | 5 gr.     | 9 0  | 32 0 | 32 0 |
| " and Blue Mass .....                     | 5 gr.     | 9 0  | 32 0 | 32 0 |
| " and Calomel .....                       | 5 gr.     | 9 0  | 32 0 | 32 0 |
| " and Hyosecy B.P. ....                   | 5 gr.     | 9 0  | 32 0 | 32 0 |
| " Extract, B.P. ....                      | 5 gr.     | 9 0  | 32 0 | 32 0 |
| Conium Compound, B.P. ....                | 5 gr.     | 5 0  | 16 0 | 16 0 |
| Copaiba Compound .....                    | 5 gr.     | 5 6  | 18 0 | 18 0 |
| " and Oleo-Resin Cubeb .....              | 5 gr.     | 11 0 | 39 6 | 39 6 |
| Corrosive Sublimate .....                 | 1-30 gr.  | 5 0  | 16 0 | 16 0 |
| " .....                                   | 1-20 gr.  | 5 0  | 16 0 | 16 0 |
| " .....                                   | 1-10 gr.  | 5 0  | 16 0 | 16 0 |
| Croton Chloral .....                      | 1 gr.     | 10 0 | 36 0 | 36 0 |
| " .....                                   | 2 gr.     | 17 0 | 63 6 | 63 6 |
| Cubeb, Oleo-Resin, with Soda .....        | 1-60 gr.  | 7 0  | 24 0 | 24 0 |
| Digitalin .....                           | 1-20 gr.  | 13 0 | 47 6 | 47 6 |
| Elatrine .....                            | 3 gr.     | 5 6  | 18 0 | 18 0 |
| Emmenagogue (Mutter's) .....              | 3 gr.     | 16 6 | 63 0 | 63 0 |
| Ergotin .....                             | 2 gr.     | 16 0 | 59 0 | 59 0 |
| Euonymin .....                            | 3 gr.     | 20 6 | 79 0 | 79 0 |
| " Compound .....                          | 3 gr.     | 16 0 | 59 0 | 59 0 |
| Ferruginous (Blaud's) .....               | 3 gr.     | 6 0  | 20 0 | 20 0 |
| " .....                                   | 5 gr.     | 7 0  | 24 0 | 24 0 |

## PILLS.

DOZ. BOTTLES  
containing 25 PILLS    containing 100 PILLS

|   | s.        | d.   | s.   | d.   |
|---|-----------|------|------|------|
| Hydrastine (White Alkaloid) .....         | 1-2 gr.   | 20 6 | 79 0 | 79 0 |
| Iodoform .....                            | 1 gr.     | 9 0  | 32 0 | 32 0 |
| " and Iron .....                          | 11 0      | 39 6 | 39 6 | 39 6 |
| Ipecac. Powdered .....                    | 1-4 gr.   | 5 0  | 16 0 | 16 0 |
| " .....                                   | 5 gr.     | 5 0  | 16 0 | 16 0 |
| " Comp. (Ipecac and Opium) .....          | 5 gr.     | 9 0  | 32 0 | 32 0 |
| " and Squill, B.P. ....                   | 5 gr.     | 5 0  | 16 0 | 16 0 |
| Iron, Arseniate .....                     | 1-8 gr.   | 5 6  | 18 0 | 18 0 |
| " Carbonate, B.P. ....                    | 5 gr.     | 5 6  | 18 0 | 18 0 |
| " by Hydrogen (Quevenne's) .....          | 1 gr.     | 5 0  | 16 0 | 16 0 |
| " Iodide (Blancard's Formula) .....       | 1 gr.     | 7 0  | 24 0 | 24 0 |
| " and Quinine Citrate .....               | 2 gr.     | 10 0 | 35 6 | 35 6 |
| " Quinine, and Strychnine .....           | 13 6      | 49 6 | 49 6 | 49 6 |
| Laxative Vegetable (Improved Cath.) ..... | 2 gr.     | 5 6  | 18 0 | 18 0 |
| Manganese, Bin-oxide .....                | 2 gr.     | 9 0  | 32 0 | 32 0 |
| Mercury, Bin-iodide .....                 | 1-16 gr.  | 5 0  | 16 0 | 16 0 |
| " Proto-iodide .....                      | 1-8 gr.   | 5 0  | 16 0 | 16 0 |
| " .....                                   | 1-4 gr.   | 5 0  | 16 0 | 16 0 |
| Morphine, Muriate .....                   | 1-8 gr.   | 7 0  | 24 0 | 24 0 |
| " .....                                   | 1-4 gr.   | 9 0  | 32 0 | 32 0 |
| Narcotic Extracts (Brown-Sequard) .....   | 1-100 gr. | 15 0 | 55 6 | 55 6 |
| Nitro-Glycerin .....                      | 1-50 gr.  | 7 0  | 24 0 | 24 0 |
| Opium, Powdered .....                     | 1 gr.     | 7 0  | 24 0 | 24 0 |
| " and Acetate of Lead, B.P. ....          | 5 gr.     | 7 0  | 24 0 | 24 0 |
| " and Camphor .....                       | 1 gr.     | 7 0  | 24 0 | 24 0 |
| Pepsin, Pure Concentrated .....           | 1 gr.     | 9 0  | 32 0 | 32 0 |
| Phosphorus .....                          | 1-100 gr. | 6 0  | 20 0 | 20 0 |
| " .....                                   | 1-50 gr.  | 6 0  | 20 0 | 20 0 |
| " .....                                   | 1-30 gr.  | 6 0  | 20 0 | 20 0 |
| " and Iron .....                          | 8 0       | 28 0 | 28 0 | 28 0 |
| " Iron and Quinine .....                  | 17 0      | 63 6 | 63 6 | 63 6 |
| " and Nux Vomica .....                    | 7 0       | 24 0 | 24 0 | 24 0 |
| " Nux Vomica and Iron .....               | 8 0       | 28 0 | 28 0 | 28 0 |
| " and Quinine .....                       | 17 0      | 63 6 | 63 6 | 63 6 |
| " Quinine, Iron, and Strychnine .....     | 17 0      | 63 6 | 63 6 | 63 6 |
| " and Valer. Zinc .....                   | 11 0      | 39 6 | 39 6 | 39 6 |
| Picrotoxin .....                          | 1-80 gr.  | 7 0  | 24 0 | 24 0 |
| Podophyllin .....                         | 1-8 gr.   | 5 0  | 16 0 | 16 0 |
| " .....                                   | 1-4 gr.   | 5 0  | 16 0 | 16 0 |
| " .....                                   | 1-2 gr.   | 5 6  | 18 0 | 18 0 |
| " Comp. ....                              | 3 0       | 28 0 | 28 0 | 28 0 |
| Quinine, Bi-Sulphate .....                | 1-4 gr.   | 5 0  | 16 0 | 16 0 |
| " .....                                   | 1-2 gr.   | 5 0  | 16 0 | 16 0 |
| " .....                                   | 1 gr.     | 5 0  | 16 0 | 16 0 |
| " .....                                   | 2 gr.     | 7 6  | 26 0 | 26 0 |
| " .....                                   | 3 gr.     | 10 6 | 38 0 | 38 0 |
| " .....                                   | 4 gr.     | 13 0 | 48 0 | 48 0 |
| " .....                                   | 5 gr.     | 16 0 | 60 0 | 60 0 |
| " Sulphate .....                          | 1-4 gr.   | 5 0  | 16 0 | 16 0 |
| " .....                                   | 1-2 gr.   | 5 0  | 16 0 | 16 0 |
| " .....                                   | 1 gr.     | 5 6  | 18 0 | 18 0 |
| " .....                                   | 2 gr.     | 8 0  | 28 0 | 28 0 |
| " .....                                   | 3 gr.     | 11 0 | 40 0 | 40 0 |
| " .....                                   | 4 gr.     | 14 0 | 52 0 | 52 0 |
| " .....                                   | 5 gr.     | 17 0 | 64 0 | 64 0 |
| " Comp. (Anti-malarial) .....             | 15 0      | 55 6 | 55 6 | 55 6 |
| Rhubarb Comp., B.P. ....                  | 5 gr.     | 7 0  | 24 0 | 24 0 |
| " and Blue Mass .....                     | 5 gr.     | 7 0  | 24 0 | 24 0 |
| Rhubarb, Ipecac. and Soda .....           | 7 0       | 24 0 | 24 0 | 24 0 |
| Salicylic Acid .....                      | 2 gr.     | 7 0  | 24 0 | 24 0 |
| " .....                                   | 5 gr.     | 11 0 | 39 6 | 39 6 |
| " Comp. ....                              | 16 6      | 63 0 | 63 0 | 63 0 |
| Soap Comp., B.P. ....                     | 5 gr.     | 8 0  | 29 0 | 29 0 |
| Squill Comp., B.P. ....                   | 5 gr.     | 5 6  | 18 0 | 18 0 |
| Strychnine .....                          | 1-50 gr.  | 5 0  | 16 0 | 16 0 |
| Zinc. Phosphide .....                     | 1-4 gr.   | 7 0  | 24 0 | 24 0 |
| " .....                                   | 1-2 gr.   | 9 0  | 32 0 | 32 0 |
| " Valerianate .....                       | 1 gr.     | 8 6  | 30 0 | 30 0 |

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"Our attention has been called by Messrs. Savory & Moore to a statement made in a circular recently issued by another firm of chemists, the purport of which would be to deprive them of the priority of invention and manufacture of the medicated gelatine discs now extensively in use for ophthalmic and hypodermic purposes. The fact is on public record, that these ophthalmic discs were first prepared by Messrs. Savory & Moore in the latter part of 1863, when they were extensively employed by Mr. Ernest Hart in the ophthalmic department of St. Mary's Hospital, as well as in private practice. This settles the question."

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**DRUGS, CHEMICALS, AND PHARMACEUTICAL PREPARATIONS.**

# BARRON, SQUIRE & CO.

(LATE DREW, BARRON, & CO.),

**WHOLESALE & EXPORT DRUGGISTS,**  
**BUSH LANE, LONDON, E.C.,**

**MANUFACTURERS OF ALL DESCRIPTIONS OF PHARMACEUTICAL PREPARATIONS,**

Beg to inform Merchants, Shippers, &c., that all Indents entrusted to them will receive careful attention and prompt execution.

Messrs. B., S. & Co. request the attention of their friends and the Trade, at home and abroad, to their having PURCHASED THE BUSINESS of Messrs. JAMES BASS & SONS, Hatton Garden, and with it the various Formulæ from which their Special Preparations have been made, and pledge themselves to supply them in all their integrity.

*Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.*



**GOLD MEDALS**—DUBLIN, 1882; BOSTON, 1883;  
LONDON (INTERNATIONAL EXHIBITION), 1884.

# SIR JAMES MURRAY'S PURE FLUID MAGNESIA.

*The ORIGINAL Article, as prepared by the Inventor, Sir James Murray, M.D.*

For over 60 years in use as an excellent remedy in cases of

**ACIDITY, INDIGESTION, HEARTBURN, GRAVEL, AND GOUT.**

Sold by all respectable Chemists, in **LARGE-SIZED** Bottles (the 1s. size containing nearly

*Double the quantity usually sold at that price*), at **1/**, **2/6**, and **3/6** each.

**CAUTION.**—Observe that the Signature of the Inventor is on every label.

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Is a valuable remedy in cases of **SLEEPLESSNESS** and **WEAK NERVES**. Bottles, **1/** and **2/** each.

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**RELIEF FROM COUGH IN TEN MINUTES.**

## HAYMAN'S BALSAM OF HOREHOUND.

THE SALE IS  
INCREASING DAILY.

IT HAS A MOST  
PLEASANT TASTE.

The most certain and speedy remedy for Coughs, Colds, Hoarseness, and all disorders of the Chest and Lungs. It has proved itself the most successful preparation ever offered. In the nursery it is invaluable, as the children are fond of it. Immediately it is taken coughing ceases, restlessness is gone, and refreshing sleep ensues. No lady who has once tried it would ever afterwards be without it.

Prepared only by **A. HAYMAN**, Chemist, **NEATH**, and sold by all Chemists in London and throughout the Kingdom.  
Price 1s. 1½d., 2s. 9d., and 4s. 6d. per bottle.

### METHYLENE.

Obtained by the action of Metallic Zinc on  
Chloroform and Alcohol.

Discovered to be a general Anæsthetic by Dr. RICHARDSON  
in 1867.

1-lb. Bottles, 16s.; 8-oz., 8s. 6d.; 4-oz., 4s. 6d.; 2-oz., 2s. 6d.  
**COMPOUND ANÆSTHETIC ETHER.**

For producing Local Anæsthesia.  
In 4-oz., 10-oz., and 20-oz. Stopped Bottles, 2s., 4s., and 7s.

**OZONIC ETHER.**

In 2-oz., 4-oz., 8-oz., and 16-oz. Stopped Bottles, 2s., 3s. 6d., 7s., and 12s.

**PEROXIDE of HYDROGEN.**

First introduced as a medicine by Dr. RICHARDSON

**ETHYLATE of SODIUM**

(Dr. RICHARDSON'S Formula), for removing Nævi, &c. In ½-oz. & 1-oz.  
Bottles, with elongated Stoppers for applying the Caustic, 2s. 6d. & 4s.

**STYPTIC COLLOID,**

or promoting the Healing of Wounds by the first intention  
In 2-oz. and 4-oz. Bottles, with brush, 2s. 6d.  
and 4s. 6d.; 16-oz., 12s.

**CHARCOAL CAPSULES,**

Containing Pure Vegetable Ivory  
Charcoal.

In Boxes, 2s. 6d. each.

### DINNEFORD'S FLUID MAGNESIA



**PERFECT IN PURITY AND UNIFORM IN STRENGTH.**

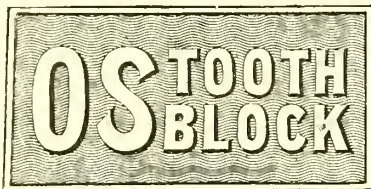
The most efficacious antacid and mild  
aperient for Delicate Constitutions,  
Ladies, Children, and Infants.

**OF ALL WHOLESALE DRUGGISTS.**



THE BEST &amp; SAFEST DENTIFRICE.

OSCAR SUTTON &amp; CO., Preston, Lancashire.



REGISTERED TRADE MARK.

The following Testimonial from Mr. JAMES A. REID, Chemist and Druggist, Helensburgh, we quote by special permission: "Enclosed please find cheque in payment for the Tooth Blocks. I am highly pleased with their new form and extra inducements presented through the leatherette labels and chemist's own name stamped on each block. These give one special encouragement to keep prominently before an intelligent public what UNDOUBTEDLY IS THE GREATEST DENTIFRICE OF THE AGE."

No. 0.  
Loose, without Boxes.

No. 1.  
In Patent Metallic Boxes,  
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In Crystal Caskets,  
retail 2s. 6d.

OVER 1,000 TESTIMONIALS.

GENUINE EMERY, EMERY CLOTH, AND BLACK LEAD.

JOHN OAKEY &amp; SONS,

MANUFACTURERS OF

Glass Paper, Emery and Glass Cloth; Emery, Black Lead, Emery Wheels Pumice, Putty Powder, Crocus, Urn Powder, Tripoli, Rouge, Plate Powder, Steel Polish, Furniture Polish, Knife Boards, Brunswick and Berlin Black, &c.

OAKEY'S WELLINGTON KNIFE POLISH,

Prepared expressly for Oakey's Patent India-Rubber Knife Boards, Buff Leather Boards, and all the Patent Knife Cleaning Machines. Sold in Canisters with perforated Tops to prevent waste, at 1d., 2d., 3d., 6d., 1s., 2s. 6d., and 4s. each.

OAKEY'S NON-MERCURIAL SILVERSMITH'S SOAP,

For Cleaning and Polishing Silver, Plate Glass, Marble, &amp;c. Tablets, 6d. each.

OAKEY'S "POLYBRILLIANT" (Registered).

A Magic Pomade for cleaning Brass, Copper, Tin, Pewter, Britannia Metal, &c. Never becomes dry and hard like other Metal Pastes. Tins 1d., 2d., 3d., and 6d. each.

WELLINGTON BLOCK BLACK LEAD,

In 1d., 2d., and 4d. Blocks, and 1s. Boxes.

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ROZALIMUM

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POWDER OR PASTE

IS THE BEST DENTIFRICE.

It is scientifically prepared by a Dental Surgeon, of large practice and great experience, and is intended to supply a long felt want, viz., a Preparation that will thoroughly cleanse the Teeth, and at the same time help to preserve them. As a stimulant to the Gums, and a preservative of the Teeth, Rozalium is not to be surpassed; it gives to the Teeth a pearly whiteness, to the Gums a healthy rosy colour, whilst it prevents decay by neutralizing the acids which accumulate between the Teeth, and imparts to the Breath a most delicious fragrance.

In Boxes, Pots, and Bottles, 1s. 6d. and 2s. 6d.

May be obtained from the Wholesale Houses, or direct from the Proprietor—

J. W. MARTIN, Dental Surgeon,  
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The Original

Arnicated

Corn and

Bunion

Plasters.

Please

see that  
YOUNG'S

goods are  
supplied, as there  
are many worthless  
imitations.

(2)

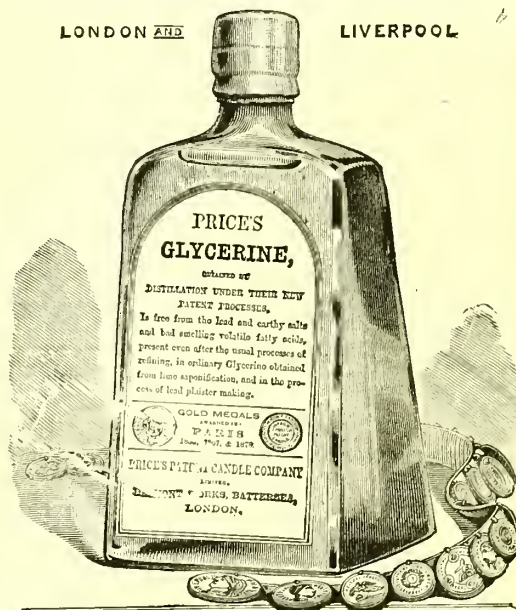
HENRY YOUNG, Manufacturer, LONDON.

ESTABLISHED  
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PRICE'S PATENT CANDLE COMPANY LIMITED

LONDON AND

LIVERPOOL



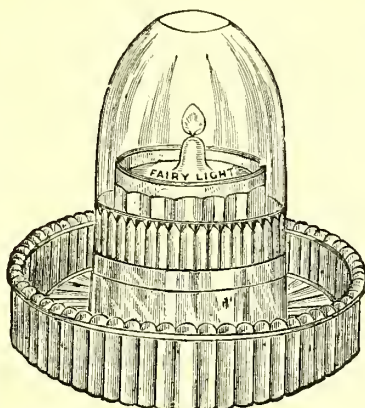
PRICE'S GLYCERINE

HAS RECEIVED THE HIGHEST AWARDS AT ALL THE GREAT EXHIBITIONS.

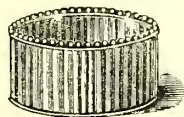


## PATENT "FAIRY" LAMPS and "FAIRY" LIGHTS.—SAML. CLARKE, Patentee.

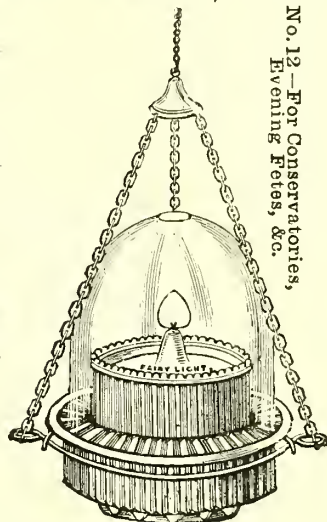
PRICES ON APPLICATION.



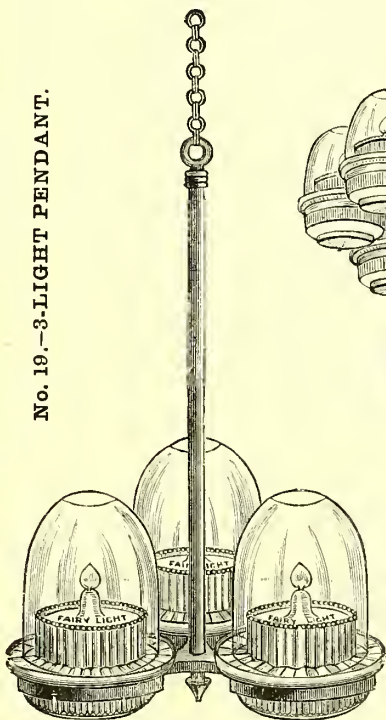
No. 17.—FLOWER CIRCLE.

"FAIRY"  
LIGHT.

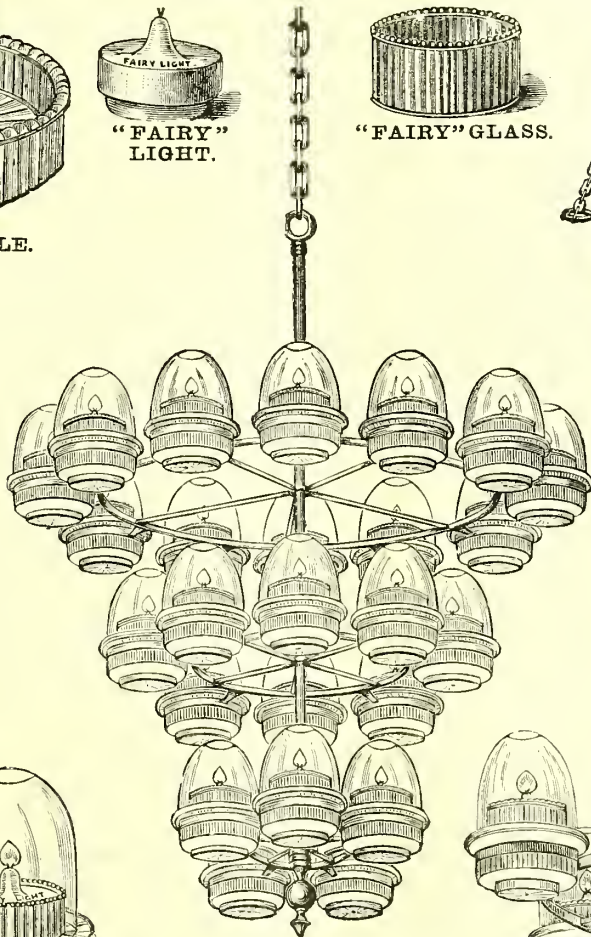
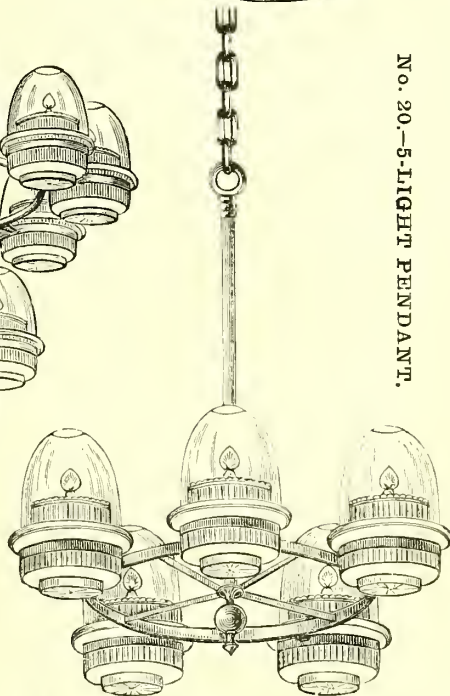
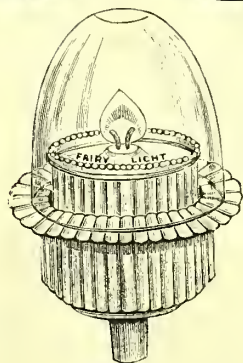
"FAIRY" GLASS.

No. 12—For Conservatories,  
Evening Fetes, &c.

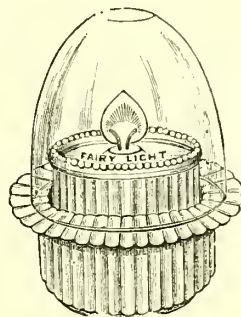
No. 19.—3-LIGHT PENDANT.



No. 20.—5-LIGHT PENDANT.

No. 22.  
25-LIGHT CHANDELIER.

No. 14.



No. 13.

N.B. See that the  
name "Saml. Clarke  
Patent & Trade Mark  
Fairy" is on every  
Lamp.

Patented, and Trade Marks Registered, in Great Britain, France, Germany, Belgium, Austria, and the United States.

MANUFACTORY—CHILD'S HILL LONDON N.W.

Show Room : 31 Ely Place, Holborn Viaduct, E.C. America : Pyramid & Fairy Light Manufactory, Newark, New Jersey.



# B. NOAKES & CO.,

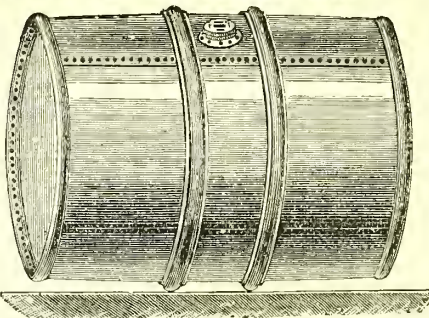
MANUFACTURERS OF  
**Metallic Casks, Drums, & Kegs**  
ENAMELLED, PLAIN, AND DECORATED  
**TIN CANISTERS AND BOXES,**  
FOR PACKING CHEMISTS' AND DRUGGISTS' SUNDRIES.

**ENAMELLED SHOW CARDS.**

IRON BARRELS,  
CAPACITY 40 TO 120 GALLONS  
AS PER ILLUSTRATION.

Cable and Telegraphic Address—  
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These large Iron Casks, similar to sketch, can be handled with equal facility to wooden barrels, and, owing to their strength and durability, can be used over and over again for an indefinite period. They are perfectly liquid tight, being tested at a very high air pressure, and, unlike wood, do not absorb any of the contents. They are all fitted with interchangeable screw hungs, and can also be fitted with screw plug in head, for draw-off tap.

They are specially adapted for all kinds of Chemical Products, Sulphuric Acid, Glycerine, Spirits, Oils, Turpentine, Petroleum, Benzoline, Varnishes, Tar, Naphtha, Mineral Extracts, and Inflammable Liquids of every description.

We are making them in three qualities, "Black Iron," "Lead Coated," and "Tinned."

PRICE LIST ON APPLICATION.

The True Origin of the Old Rhyme.



*Where are you going to My Pretty Maid?  
I'm going a milking Sir she said—  
Are your CATTLE all healthy My Pretty Maid?  
They are, thanks to DAY & SONS Sir she said—*

Awarded 26 Prize Medals.

USED EVERYWHERE FOR NEARLY 50 YEARS.

## DAY & SONS'

WORLD-FAMED

## HORSE & CATTLE MEDICINES.

DAY & SONS' "PURIFIED DRIFFIELD OILS" (commonly called by Farmers "Days' Black Oils") for Wounds and Injuries of all kinds in all animals; anointing in difficult Lambing and Calving, &c. Price 2/6 per bottle.

DAY & SONS' "BLACK DRINK," the renowned remedy for Colic or Gripes in Horses, Scour, Diarrhoea, Debility, &c., in all stock. Price 1/8 per bottle, or 19/ per dozen.

DAY & SONS' "RED DRINK," unequalled for cleansing after Calving, and all Feverish or Inflammatory Disorders in Cattle. Price 12/ per dozen.

DAY & SONS' "WHITE OILS," for all External Injuries, Sprains, Swellings, Rheumatism, &c. Price 2/6 per bottle.

DAY & SONS' "ALTERATIVE POWDERS," for Horses. Price 3/6 per Canister containing one dozen.

INVENTORS AND SOLE PROPRIETORS OF THE "ORIGINAL,"

## UNIVERSAL MEDICINE CHEST, PRICE £2 4s.,

carriage paid, which contains above five, together with four other, matchless medicines, and easy guide, "Everyday Farriery."

Beware of Imitations and note our ONLY Address—

## DAY & SONS, CREWE, Cheshire.

WHOLESALE AGENTS:—Messrs. Burzyne, Burdidges & Co.; Sanger & Sons; Evans, Lescher & Webb, London; Messrs. Evans, Sons & Co., Liverpool, &c., &c.

## HORSES.—LIEUT. JAMES' BLISTER

(Manufactured by R. J. JAMES, the Grandson of the Inventor).



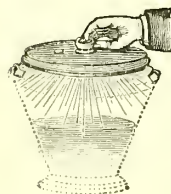
THIS CELEBRATED BLISTER IS NOW OFFERED TO THE TRADE AT THE FOLLOWING REDUCED PRICES:—  
1 oz. pots from 14/- per doz. to 12/6 per doz. 1 lb. pots from £4 0 per doz. to £4 0 0  
2 " " £1 5 6 " £1 3 0 " 1 " " 7 16 0 " 7 10 0  
4 " " 2 8 0 " 2 4 0 " 1 " " 7 16 0 " 7 10 0

Observe the Trade Mark.—"A Horse's Head on the top of each Pot, and the signature, R. J. James."

Wholesale Agents, BUTLER & CRISP, 4 Cheapside; NEWBURY, 37 Newgate Street; MAW, SON & THOMPSON, 11 Aldersgate Street; HAYES & Co., Dublin; GOULDING, Cork; FOGGITT, Thirsk; and SANG & BARKER, Edinburgh. Agents for the Colonies required. Apply, with reference, to

R. J. JAMES, South Retford, Notts.

JAMES v. JAMES.—LORD ROMILLY, the Master of the Rolls, on February 23, 1872, declared "that I had an equal right with other members of the Inventor's family possessing the receipt to make and sell this Blister."—R. J. JAMES.



INVALUABLE FOR THE SICK ROOM.  
**THE SANITARY DISINFECTING COVER**

(GREENBURY'S PATENT).

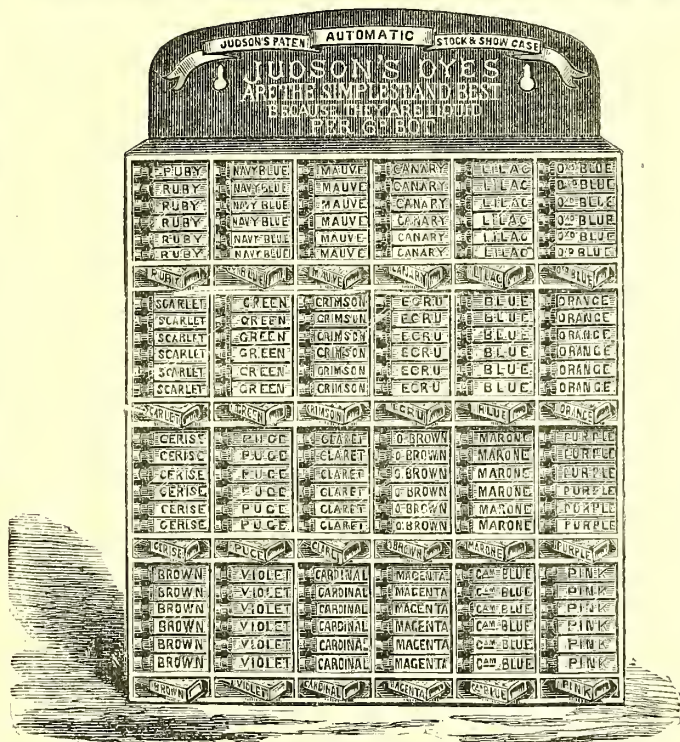
For Slop Pails, Commodes, &c.

REDUCED PRICES.

This cover has a chamber which can be filled with Condy's Fluid or other Disinfectant. By pressing the ball in handle a spray is injected, sufficient to disinfect or deodorise the contents. Sizes—7½", 8½", 9½", 10½", 11½", 12½", 13½", 14½", 15½", 16½", 17½", 18½", 19½", 20½", 21½", 22½", 23½", 24½", 25½", 26½", 27½", 28½", 29½", 30½", 31½", 32½", 33½", 34½", 35½", 36½", 37½", 38½", 39½", 40½", 41½", 42½", 43½", 44½", 45½", 46½", 47½", 48½", 49½", 50½", 51½", 52½", 53½", 54½", 55½", 56½", 57½", 58½", 59½", 60½", 61½", 62½", 63½", 64½", 65½", 66½", 67½", 68½", 69½", 70½", 71½", 72½", 73½", 74½", 75½", 76½", 77½", 78½", 79½", 80½", 81½", 82½", 83½", 84½", 85½", 86½", 87½", 88½", 89½", 90½", 91½", 92½", 93½", 94½", 95½", 96½", 97½", 98½", 99½", 100½", 101½", 102½", 103½", 104½", 105½", 106½", 107½", 108½", 109½", 110½", 111½", 112½", 113½", 114½", 115½", 116½", 117½", 118½", 119½", 120½", 121½", 122½", 123½", 124½", 125½", 126½", 127½", 128½", 129½", 130½", 131½", 132½", 133½", 134½", 135½", 136½", 137½", 138½", 139½", 140½", 141½", 142½", 143½", 144½", 145½", 146½", 147½", 148½", 149½", 150½", 151½", 152½", 153½", 154½", 155½", 156½", 157½", 158½", 159½", 160½", 161½", 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628½, 629½, 630½, 631½, 632½, 633½, 634½, 635½, 636½, 637½, 638½, 639½, 640½, 641½, 642½, 643½, 644½, 645½, 646½, 647½, 648½, 649½, 650½, 651½, 652½, 653½, 654½, 655½, 656½, 657½, 658½, 659½, 660½, 661½, 662½, 663½, 664½, 665½, 666½, 667½, 668½, 669½, 670½, 671½, 672½, 673½, 674½, 675½, 676½, 677½, 678½, 679½, 680½, 681½, 682½, 683½, 684½, 685½, 686½, 687½, 688½, 689½, 690½, 691½, 692½, 693½, 694½, 695½, 696½, 697½, 698½, 699½, 700½, 701½, 702½, 703½, 704½, 705½, 706½, 707½, 708½, 709½, 710½, 711½, 712½, 713½, 714½, 715½, 716½, 717½, 718½, 719½, 720½, 721½, 722½, 723½, 724½, 725½, 726½, 727½, 728½, 729½, 730½, 731½, 732½, 733½, 734½, 735½, 736½, 737½, 738½, 739½, 740½, 741½, 742½, 743½, 744½, 745½, 746½, 747½, 748½, 749½, 750½, 751½, 752½, 753½, 754½, 755½, 756½, 757½, 758½, 759½, 760½, 761½, 762½, 763½, 764½, 765½, 766½, 767½, 768½, 769½, 770½, 771½, 772½, 773½, 774½, 775½, 776½, 777½, 778½, 779½, 780½, 781½, 782½, 783½, 784½, 785½, 786½, 787½, 788½, 789½, 790½, 791½, 792½, 793½, 794½, 795½, 796½, 797½, 798½, 799½, 800½, 801½, 802½, 803½, 804½, 805½, 806½, 807½, 808½, 809½, 810½, 811½, 812½, 813½, 814½, 815½, 816½, 817½, 818½, 819½, 820½, 821½, 822½, 823½, 824½, 825½, 826½, 827½, 828½, 829½, 830½, 831½, 832½, 833½, 834½, 835½, 836½, 837½, 838½, 839½, 840½, 841½, 842½, 843½, 844½, 845½, 846½, 847½, 848½, 849½, 850½, 851½, 852½, 853½, 854½, 855½, 856½, 857½, 858½, 859½, 860½, 861½, 862½, 863½, 864½, 865½, 866½, 867½, 868½, 869½, 870½, 871½, 872½, 873½, 874½, 875½, 876½, 877½, 878½, 879½, 880½, 881½, 882½, 883½, 884½, 885½, 886½, 887½, 888½, 889½, 890½, 891½, 892½, 893½, 894½, 895½, 896½, 897½, 898½, 899½, 900½, 901½, 902½, 903½, 904½, 905½, 906½, 907½, 908½, 909½, 910½, 911½, 912½, 913½, 914½, 915½, 916½, 917½, 918½, 919½, 920½, 921½, 922½, 923½, 924½, 925½, 926½, 927½, 928½, 929½, 930½, 931½, 932½, 933½, 934½, 935½, 936½, 937½, 938½, 939½, 940½, 941½, 942½, 943½, 944½, 945½, 946½, 947½, 948½, 949½, 950½, 951½, 952½, 953½, 954½, 955½, 956½, 957½, 958½, 959½, 960½, 961½, 962½, 963½, 964½, 965½, 966½, 967½, 968½, 969½, 970½, 971½, 972½, 973½, 974½, 975½, 976½, 977½, 978½, 979½, 980½, 981½, 982½, 983½, 984½, 985½, 986½, 987½, 988½, 989½, 990½, 991½, 992½, 993½, 994½, 995½, 996½, 997½, 998½, 999½, 1000½, 1001½, 1002½, 1003½, 1004½, 1005½, 1006½, 1007½, 1008½, 1009½, 1010½, 1011½, 1012½, 1013½, 1014½, 1015½, 1016½, 1017½, 1018½, 1019½, 1020½, 1021½, 1022½, 1023½, 1024½, 1025½, 1026½, 1027½, 1028½, 1029½, 1030½, 1031½, 1032½, 1033½, 1034½, 1035½, 1036½, 1037½, 1038½, 1039½, 1040½, 1041½, 1042½, 1043½, 1044½, 1045½, 1046½, 1047½, 1048½, 1049½, 1050½, 1051½, 1052½, 1053½, 1054½, 1055½, 1056½, 1057½, 1058½, 1059½, 1060½, 1061½, 1062½, 1063½, 1064½, 1065½, 1066½, 1067½, 1068½, 1069½, 1070½, 1071½, 1072½, 1073½, 1074½, 1075½, 1076½, 1077½, 1078½, 1079½, 1080½, 1081½, 1082½, 1083½, 1084½, 1085½, 1086½, 1087½, 1088½, 1089½, 1090½, 1091½, 1092½, 1093½, 1094½, 1095½, 1096½, 1097½, 1098½, 1099½, 1100½, 1101½, 1102½, 1103½, 1104½, 1105½, 1106½, 1107½, 1108½, 1109½, 1110½, 1111½, 1112½, 1113½, 1114½, 1115½, 1116½, 1117½, 1118½, 1119½, 1120½, 1121½, 1122½, 1123½, 1124½, 1125½, 1126½, 1127½, 1128½, 1129½, 1130½, 1131½, 1132½, 1133½, 1134½, 1135½, 1136½, 1137½, 1138½, 1139½, 1140½, 1141½, 1142½, 1143½, 1144½, 1145½, 1146½, 1147½, 1148½, 1149½, 1150½, 1151½, 1152½, 1153½, 1154½, 1155½, 1156½, 1157½, 1158½, 1159½, 1160½, 1161½, 1162½, 1163½, 1164½, 1165½, 1166½, 1167½, 1168½, 1169½, 1170½, 1171½, 1172½, 1173½, 1174½, 1175½, 1176½, 1177½, 1178½, 1179½, 1180½, 1181½, 1182½, 1183½, 1184½, 1185½, 1186½, 1187½, 1188½, 1189½, 1190½, 1191½, 1192½, 1193½, 1194½, 1195½, 1196½, 1197½, 1198½, 1199½, 1200½, 1201½, 1202½, 1203½, 1204½, 1205½, 1206½, 1207½, 1208½, 1209½, 1210½, 1211½, 1212½, 1213½, 1214½, 1215½, 1216½, 1217½, 1218½, 1219½, 1220½, 1221½, 1222½, 1223½, 1224½, 1225½, 1226½, 1227½, 1228½, 1229½, 1230½, 1231½, 1232½, 1233½, 1234½, 1235½, 1236½, 1237½, 1238½, 1239½, 1240½, 1241½, 1242½, 1243½, 1244½, 1245½, 1246½, 1247½, 1248½, 1249½, 1250½, 1251½, 1252½, 1253½, 1254½, 1255½, 1256½, 1257½, 1258½, 1259½, 1260½, 1261½, 1262½, 1263½, 1264½, 1265½, 1266½, 1267½, 1268½, 1269½, 1270½, 1271½, 1272½, 1273½, 1274½, 1275½, 1276½, 1277½, 1278½, 1279½, 1280½, 1281½, 1282½, 1283½, 1284½, 1285½, 1286½, 1287½, 1288½, 1289½, 1290½, 1291½, 1292½, 1293½, 1294½, 1295½, 1296½, 1297½, 1298½, 1299½, 1300½, 1301½, 1302½, 1303½, 1304½, 1305½, 1306½, 1307½, 1308½, 1309½, 1310½, 1311½, 1312½, 1313½, 1314½, 1315½, 1316½, 1317½, 1318½, 1319½, 1320½, 1321½, 1322½, 1323½, 1324½, 1325½, 1326½, 1327½, 1328½, 1329½, 1330½, 1331½, 1332½, 1333½, 1334½, 1335½, 1336½, 1337½, 1338½, 1339½, 1340½, 1341½, 1342½, 1343½, 1344½, 1345½, 1346½, 1347½, 1348½, 1349½, 1350½, 1351½, 1352½, 1353½, 1354½, 1355½, 1356½, 1357½, 1358½, 1359½, 1360½, 1361½, 1362½, 1363½, 1364½, 1365½, 1366½, 1367½, 1368½, 1369½, 1370½, 1371½, 1372½, 1373½, 1374½, 1375½, 1376½, 1377½, 1378½, 1379½, 1380½, 1381½, 1382½, 1383½, 1384½, 1385½, 1386½, 1387½, 1388½, 1389½, 1390½, 1391½, 1392½, 1393½, 1394½, 1395½, 1396½, 1397½, 1398½, 1399½, 1400½, 1401½, 1402½, 1403½, 1404½, 1405½, 1406½, 1407½, 1408½, 1409½, 1410½, 1411½, 1412½, 1413½, 1414½, 1415½, 1416½, 1417½, 1418½, 1419½, 1420½, 1421½, 1422½, 1423½, 1424½, 1425½, 1426½, 1427½, 1428½, 1429½, 1430½, 1431½, 1432½, 1433½, 1434½, 1435½, 1436½, 1437½, 1438½, 1439½, 1440½, 1441½, 1442½, 1443½, 1444½, 1445½, 1446½, 1447½, 1448½, 1449½, 1450½, 1451½, 1452½, 1453½, 1454½, 1455½, 1456½, 1457½, 1458½, 1459½, 1460½, 1461½, 1462½, 1463½, 1464½, 1465½, 1466½, 1467½, 1468½, 1469½, 1470½, 1471½, 1472½, 1473½, 1474½, 1475½, 1476½, 1477½, 1478½, 1479½, 1480½, 1481½, 1482½, 1483½, 1484½, 1485½, 1486½, 1487½, 1488½, 1489½, 1



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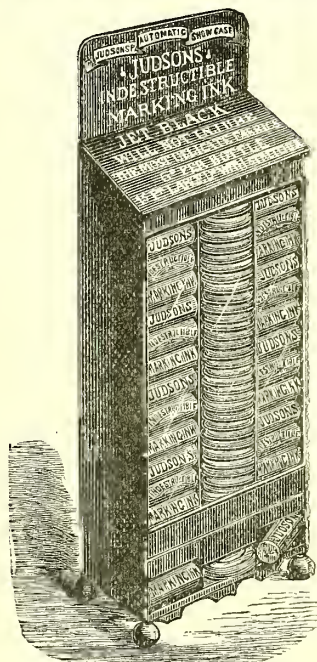
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This is the most attractive and convenient Show Case ever offered to  
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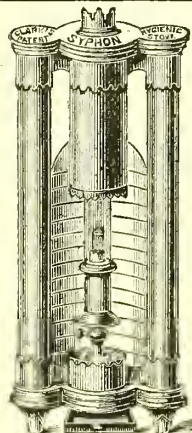
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# SILICATED CARBON

## PATENT MOVABLE BLOCK FILTERS.

### SYPHON FILTERS FOR TRAVELLERS.

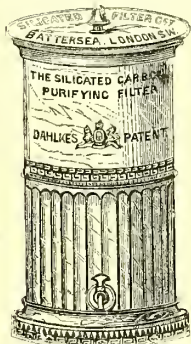
By means of these Filters pure and perfectly wholesome water may be drunk from any pond or stream by simply immersing the Filter therein and drawing the water through the tube by suction.

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WITH PATENT MOVABLE BLOCK.  
MADE IN MARBLED CHINA.

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|---|----|--------------|----|----|------|
| A | .. | Two Gallons  | .. | .. | 35s. |
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Made in Porous Terra-Cotta Ware,

Which acts with remarkable power as a cooler, and renders this Filter invaluable, especially in Tropical Climates,

AFFORDING A  
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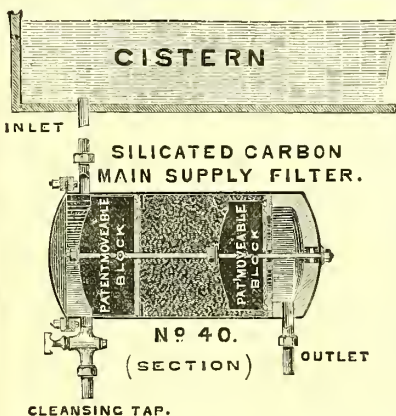
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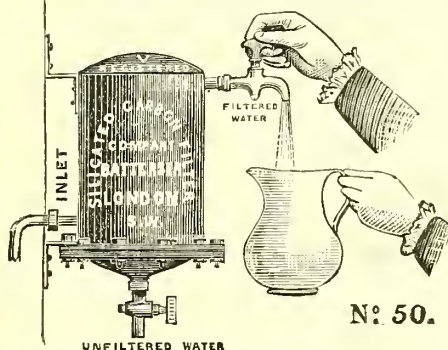


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No 50 (Registered.)



Complete, Price £3 8s. each.

These Filters require no attention from servants, as they are always filled and ready for use. The act of drawing Unfiltered Water cleanses the Filter, by washing away the impurities collected on the carbon.

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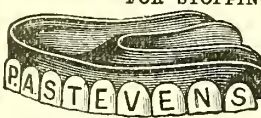
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| <b>EXPORTS.</b><br>Liquorice Root,<br>Colocyntns,<br>Saffron, Garlic,<br>Medicinal Seeds,<br>Roots, Flowers,<br>Wool,<br>Esparto, and<br>Produce. | <b>JOSE BOWRON,</b><br>GENERAL MERCHANT,<br><b>MURCIA.</b><br>Telegraphic Address:<br>"BOWRON MURCIA." | <b>IMPORTS.</b><br>Grain, Drugs,<br>Proprietary<br>Articles,<br>Druggists'<br>Sundries,<br>Seeds,<br>Scientific<br>Novelties, etc. |
|---|--|--|

 To all those of either sex who have lost or are losing  
 their Hair,  
**CAPPER'S**  
**CRINIDONE,** THE HAIR  
 PRODUCER.  
 WILL PROVE A BOON.  
 Thousands of living Testimonials testify to the  
 efficacy of "CRINIDONE." In bottles, 1/ each.  
 Wholesale Agents—EVANS, SONS & CO., Liverpool.  
 Sole Manufacturer—W. B. CAPPER,  
 Oxford Street, C-on-M., MANCHESTER.

**PERFUMES, No. 30.**  
**FIFTY KINDS.**  
 9s. for 20 oz., Carriage Paid.  
*Samples of any kind for 2 stamps.*  
 When buying, compare my Perfumes with other makers', and buy the best.  
**GEORGE DURRANT, HERTFORD.**  
 London Depot—Messrs. BAISS BROS. & CO.



## THEEROLENE SANITARY DISINFECTANT AND FLUID SHEEP DIP.

NON-POISONOUS.

THE BEST AND MOST RELIABLE, AND THEREFORE THE CHEAPEST  
ANTI-FRICTION GREASE, OILS, PAINTS, TAR, ROSIN, &c.  
PITCH, in Boxes and Casks, from 1 lb. to 4 cwt.

Prices and samples on application.

ELVIN BROTHERS, HULL.

## HARSTON & CO., LEEDS. GINGER ALE

From PURE JAMAICA GINGER ROOT.  
SELTZER, POTASS, LITHIA, SODA WATER, LEMONADE,  
FOR HOME OR EXPORT.

LINT.

THE

LIVERPOOL PATENT LINT CO.

MARK STREET MILLS,  
NETHERFIELD ROAD NORTH,  
LIVERPOOL.

See Advertisement.



TO LET.

BY SPECIAL  
APPOINTMENT.

## SPRATTS PATENT MEAT "FIBRINE" VEGETABLE DOG CAKES (WITH BEETROOT).

BY SPECIAL  
APPOINTMENT.

**DOG MEDICINES** for the Cure of Distemper, Worms, Mange, Eczema, Ear Canker, Rheumatism,  
and the various other Canine Diseases. Full List and Pamphlet on Canine Diseases, post free.

"COMMON SENSE OF DOG DOCTORING," price 6d.

DOG SOAP.

**LOCURIUM.** Price 6d. and 2s. per Bottle, retail. A Patent Vegetable Oil, curing Sore Feet in Dogs,  
Cracked Heels, Broken Knees, or Sore Backs in Horses; and Sores, Bites, and Wounds of all kinds either in man or beast.  
Small Pamphlets on Canine Diseases supplied free for distribution.

WHOLESALE  
TERMS OF

SPRATTS PATENT LIMITED, LONDON, S.E.,

OR YOUR WHOLESALE  
HOUSE.

## HORSE, CATTLE, AND SHEEP MEDICINES.

BY ROYAL APPOINTMENT.

By Special Warrant,  
Dated 27th December, 1865.

DAY, SON &amp; HEWITT,

INVENTORS AND SOLE PROPRIETORS OF THE

By Special Warrant,  
Dated 10th February, 1866.

## "ORIGINAL" STOCK BREEDERS' MEDICINE CHESTS.

Containing the following Matchless Remedies for all Disorders in Horses, Cattle, Calves, Sheep, &amp; Lambs:

### THE CHEMICAL EXTRACT.

For assuaging pain and inflammation in all wounds, saddle galls, strains,  
bruises, and swellings in horses; for painning after calving and lambing,  
and for swollen udders and sore feet. ¼-dozen box, 7s. 6d.

### THE RED DRENCH

Celebrated for inflammatory disorders; such as fevers, pleurisy, foot-and-  
month complaint, yellows, surfeit, and red water. Also for difficult  
calving and lambing. 3s. 6d. and 13s. per dozen box.

### THE GASEOUS FLUID.

Unmatched for colic or gripes and debility in horses, for colds, chills,  
shivering fits, and diarrhoea in cattle, calves, and sheep. 20s. per dozen box.

### THE CARMINATIVE CHALK.

A warm stomachic in severe diarrhoea or flux, by way of change of the  
gaseous fluid in great irritation of the bowels. ½-dozen box, 10s.

Price of Chests, with "Guide to Farriery"—No. 1, £6/6/0; No. 2, £2/16/6; No. 4, £2/17/6 (for horses only). Carriage paid.

### THE RED PASTE BALLS AND RED POWDERS.

Invaluable for ill-conditioned horses and after hard hunting and driving  
For coughs, colds, staring coat, itching, swollen legs, and want of strength.  
The Powder is to be given in the feed. 7s. 6d. per dozen.

### THE BLACK PHYSIC BALLS

Excellent for confined bowels and for worms in horses, but a bran mash  
should be first given. In bad cases of worms give a dose of Broncholine  
after the Ball. For cows and oxen, for stoppage of the bowels, give a  
dissolved Ball. 8s. per dozen.

### THE BRONCHOLINE.

Invaluable for hnsk, hoose, or cough in cattle, calves, and sheep; for  
tapeworms, and worms in horses. ¼-dozen box, 7s. 6d.

### THE GASEODYNE.

Used as laudanum in uncontrollable spasmodic pains in ewes lambing  
and perfectly safe. ¼-dozen box, 10s. 6d.

### THE ALCOHOLIC ETHER.

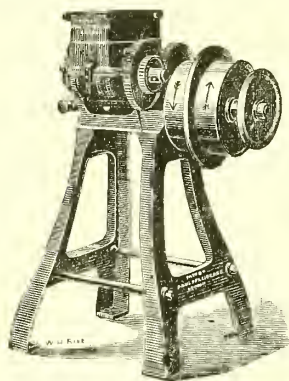
Used as sweet spirits of nitre in severe colds and shivering fits. ¼-dozen  
box, 7s. 6d.

Prepared only by DAY, SON &amp; HEWITT, 22 DORSET STREET, LONDON, W.,

And sold by all Wholesale Houses in London; Hood & Co., Melbourne; Felton, Grimwade & Co., Melbourne; Kempthorne, Prosser & Co., Dunedin  
and Auckland; Fairthorne & Co., Llancoeston; Dombrain & Co., Christchurch; Jenoure & Co., Jamaica.

A LIBERAL DISCOUNT TO EXPORTERS, AND ALL PARTICULARS ON APPLICATION.





# CHEMISTS' MACHINERY.

## PILL MASS KNEADING MACHINES.

## PILL MAKING MACHINES.

## DRUG GRINDING MACHINES.

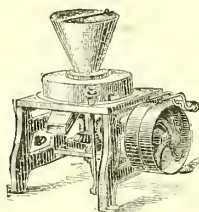
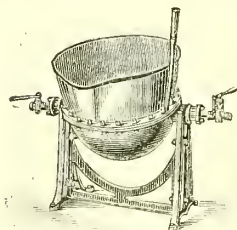
## SIFTING MACHINES.

FULL PARTICULARS OF ABOVE ON APPLICATION TO

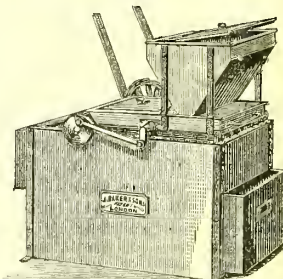
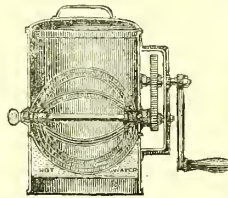
**WERNER & PFLEIDERER.** 86 Upper Ground St., Blackfriars Bridge, LONDON. S.E.

# JOSEPH BAKER & SONS, 58 City Road, LONDON, E.C.

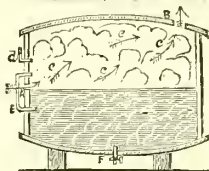
Awards received for our Machinery:—3 Medals, including "THE GOLD MEDAL," Health Exhibition, London, 1884;  
DIPLOMA OF HONOUR, Amsterdam, 1886;  
2 GOLD MEDALS—HIGHEST AWARD—Edinburgh, 1886.



Drug and Grinding  
Mills.  
Sifting and Mixing  
Machines.  
Melting Pans.  
Emulsion Mixers.  
Lozenge and Jujube  
Machines.



PARTICULARS AND PRICES ON APPLICATION.



## NEW METHOD OF MAKING VINEGAR, BY THE REVOLVING APPARATUS (Michaelis' Patent).

For further particulars  
See the Chemists' and Druggists' Diary, 1884, page 274,  
OR APPLY TO

**PAUL ROTHERMEL,**  
105 (late of 27) LEADENHALL ST., LONDON.

"laden with the scent of flowers,  
And breath of odorous Spring."

# SPINNER'S TEAS.

A company of Merchants are now selling through SPINNER & CO. the choicest Teas that come from India and China at 2/8, 2/4, 2/, and 1/8 a pound, in packets only. These are the perfection of Teas, and will please the most fastidious.—Agents wanted in every town and village. For Terms apply to SPINNER & Co., 60 Strand, London.

**SPINNER & CO., London and Liverpool.**

# TOWER TEA

A SAFE and PROFITABLE addition to a Chemist's Business.

For retail at



The London Broken Tea ... 1/8

The London Two Shilling Tea... 2/-

The London 2/8 Assam Tea... 2/8

For Testimonials and References see the full page Advertisement which appears monthly in this Journal. Last insertion November 27, page iii.

**THE GREAT TOWER STREET TEA CO., LIMITED,**  
LONDON.

## CHEMISTS' TEA AGENCY.

### WALKER & DALRYMPLE'S

BROKEN-LEAF TEA, 1s. 8d. per lb.

A MONEY SAVING TEA. ABSOLUTELY PURE.

The small leaf from some of the finest India and China Teas. Produces a Tea in the cup, stronger, richer, and cheaper than most whole-leaf Teas. Agents appointed, where unrepresented, throughout the United Kingdom.

### WALKER & DALRYMPLE'S

INTERMEDIATE TEA, 2s. per lb.

BEST at the PRICE EVER SOLD. Great strength and a most useful Tea where there is a large consumption. Recommended to all who wish to SAVE in their Tea. Agents appointed, where unrepresented, throughout the United Kingdom.

### WALKER & DALRYMPLE'S TEAS.— AGENTS APPOINTED, where unrepresented, throughout the United Kingdom.

Prospectus and Samples Free on Application.

Warehouses, 154, 155, 159 and 160 WHITECHAPEL ROAD, and 2, 4, 6, 8, 10, 11, and 12 BRADY STREET, LONDON.  
P.O.O. payable at head office. Bankers, the National Provincial Bank of England.





MAY BE HAD ON APPLICATION,  
ENCLOSING BUSINESS CARD,



S. Maw, Son & Thompson's

# QUARTERLY PRICE CURRENT

AND

# BOOK OF ILLUSTRATIONS

OF

Surgeons' Instruments and Appliances;

INSTRUMENTS, &c., FOR VETERINARY PURPOSES;

Druggists' Apparatus, Implements, Utensils,

And other requisites employed in Pharmacy and the Dispensing of Medicines;

MEDICAL GLASS AND EARTHENWARE; MEDICINE CHESTS;

*Shop Fittings and Glass Show-Cases;*

**LINT AND SPREAD PLASTERS;**

Flesh Brushes, Gloves, Rubbers, &c.,

HAIR, TOOTH, AND NAIL BRUSHES;

*TOILET AND SMELLING BOTTLES, FEEDING BOTTLES;*

Proprietary Articles, Perfumery, and

**DRUGGISTS' SUNDRIES OF ALL KINDS.**

MANUFACTURED AND SOLD BY

**S. MAW, SON & THOMPSON,**

ALDERSGATE STREET, LONDON.

Forwarded, Post Free, to all parts of the World.



# KEENE & ASHWELL'S

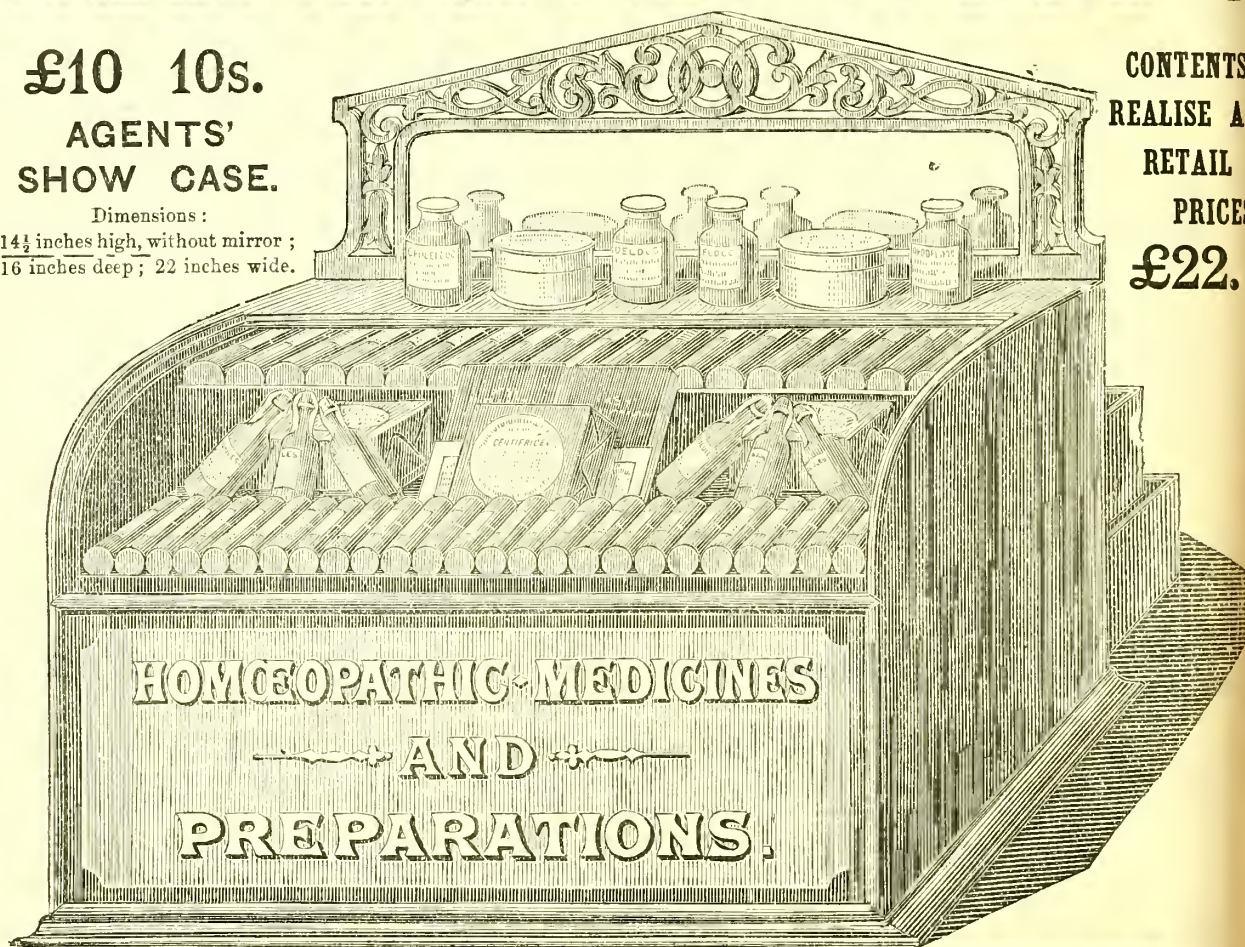
£10 10s.

AGENTS'  
SHOW CASE.

Dimensions :

14½ inches high, without mirror ;  
16 inches deep ; 22 inches wide.

CONTENTS  
REALISE AT  
RETAIL  
PRICES,  
£22.

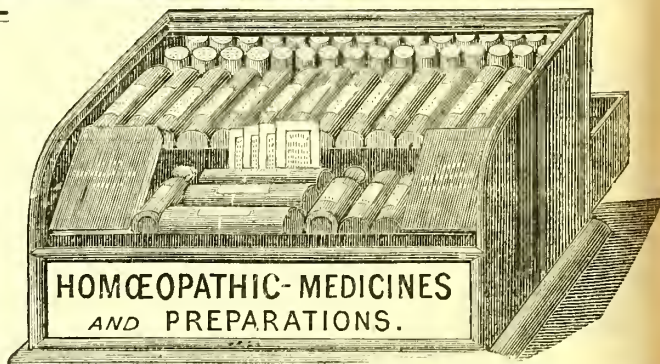


**50/-** AGENT'S SHOW CASE.

CONTENTS REALISE AT  
RETAIL PRICES **105/-**

Size of 50s. Case, 16 x 10½ x 8.

This is the cheapest and best Homœopathic Show Case in the trade, and the only one with bent glass for the money. A list of others on application.



*Homœopathic Medicines supplied in Bulk, and with Keene & Ashwell's "Companion to the Homœopathic Pharmacopœias," Chemists may be their own manufacturers. The "Companion," post free, 3/6, and Price Lists on application.*

**1/-** SIZE, **CAMPHOR PILULES** **3/9** Per doz.  
1 oz.

FIND A READY SALE EVERYWHERE.

DEPOT AND LABORATORY, **74 NEW BOND STREET.**  
LONDON.



A copy of this Supplement is inserted in every number issued of "THE CHEMIST AND DRUGGIST."

**SPECIAL EXTRA SUPPLEMENT.**  
DEC. 11,  
1886.

**BUSINESSES WANTED.  
BUSINESSES FOR SALE.  
PREMISES TO LET.**

  
**AUCTION SALES**

**PARTNERSHIPS.  
SITUATIONS WANTED.  
SITUATIONS VACANT.**

**EXCHANGE COLUMN**

Advertisements for this Supplement must be prepaid, and can be received at the Office, 42 Cannon Street, until 5 p.m. on **Thursday afternoon**, or by first post on **Friday morning** of each week.

Remittances payable to **EDWARD HALSE**, crossed **MARTIN & CO.** Stamps are taken in payment.

The Terms for Advertisements in this Supplement will be found printed under each heading.

OFFICE: 42 CANNON STREET, LONDON, E.C.

### The VALUE of "THE CHEMIST & DRUGGIST."

#### TESTIMONY BY ADVERTISERS.

We have recently received many expressions of satisfaction from Advertisers, and amongst them is the following note:—

I am most gratified with the results of my advertising in your paper. I consider it by far the better journal for business than any other published. Facts speak for themselves. I find THE CHEMIST AND DRUGGIST mentioned ten times where other of our Trade Journals are once. I cannot allow this opportunity to pass without thanking you for the unremitting attention you have always shown. I must confess I had grave misgivings concerning your alteration from monthly to weekly publication; but, instead of fears, they are a pleasurable knowledge that business has increased wonderfully. (32/22.)

## CHEMISTS' TRANSFERS.

### MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C., CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION. Immediate attention given to Foreign Commissions. Terms for Valuation on application. N.B.—No CHARGE TO PURCHASERS.

### Messrs. W. H. TAYLOR & CO., 79 Queen Street, London, E.C.,

Have the following Businesses for transfer:—

**IN GOOD-CLASS LONDON SUBURB.**—A very profitable light Retail, Dispensing, and Prescribing Business; returns about £500, capable of considerable increase; vendor retiring through advanced age; good house and garden; price £250.

**LONDON, W.**—High-class Dispensing, Light Retail, and some Prescribing; returns about £800; net profits over £350; price £550.

**LINCOLNSHIRE.**—Agricultural Mixed Business; returning about £900 at full prices for everything; rent very low; good house and premises; price £450.

N.B.—Our printed Register of Businesses for Sale will shortly be ready.

### BUSINESSES FOR DISPOSAL.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

**L**ANCASHIRE.—Dispensing and Light Retail; returns £1,000, and under energetic management capable of much increase; shop has fine double-plate front, with excellent house attached; will be sold (without goodwill) at valuation of stock and fixtures, about £600; an excellent chance of securing a well-established good-class concern at below value. F. J. Brett, Valuer, Leicester.

**N**ORTHUMBERLAND.—Old-established Business of a Chemist and Grocer for sale, in consequence of death of proprietor. Apply to T. & R. Nicholson, Solicitors, Morpeth.

**F**AMILY Dispensing and Prescribing Business, in a thickly-populated good-class suburb of a Northern city; shop handsomely fitted; now returning under a manager between £600 and £700; business can be largely increased by a resident owner; by valuation or otherwise, about £500. Mr. Lake, 11 Olive Mount, Higher Tranmere, Birkenhead.

**A** CHEMIST'S BUSINESS in first-class neighbourhood; well fitted and stocked; price £180, or reasonable offer; no agents. Address, "Chemist," Mr. T. Burgess, Chemist, 12 Foubert's Place, Regent Street, W.

**D**ISPENSING and Light Retail, for immediate disposal on easy terms; large shop, well fitted; good house, 8 rooms, bath, w.c.; capital position, in rapidly increasing district; exceptional opportunity for active man with small capital; cash £100, balance by arrangement. Apply, J. H. Walker, Seacombe, Cheshire.

**T**O CHEMISTS AND DRUGGISTS.—For immediate disposal, a Genuine Business, established over 50 years; premises large and commodious, situated in main thoroughfare in a large manufacturing town; capital required about £400. For further particulars apply to S. Bennett, Tunstall, Staffordshire Potteries.



**EMPLOYERS WANTING ASSISTANTS.***3s. 6d. for fifty words; 6d. for every 10 words beyond.*

**W**ANTED, a trustworthy and energetic Senior Assistant for the Retail; must be accustomed to a good Mixed country trade; first-class references essential; state age, height, salary required (outdoor), and full particulars; this is a comfortable situation to a suitable man. W. Kemp & Son, Chemists, Horncastle.

**W**ANTED, early in January, by a medical man in a large town, a trustworthy man to Dispense, Keep Books, &c.; furnished apartments, with coal and gas, are provided at a branch establishment a few minutes' walk from the principal's residence; a married man, whose wife would superintend and keep in order the house, preferred. Apply, X, 221 Chester Road, Manchester.

**D**RUGGISTS' SUNDRIES.—Wanted, a Traveller for the North of England. Address, stating full particulars, to Messrs. Ayrtton & Saunders, 149 Duke Street, Liverpool.

**W**ANTED, young man as Assistant for Light Retail trade in a large town near Manchester; Minor qualifications; must be quick and accurate dispenser, good prescriber, and pushing salesman. Apply, stating age, references, salary, &c., enclosing carte (which will be returned), to J. T., care of Raimes & Co., 13 Micklegate, York.

**W**ANTED, after Christmas, an Indoor Assistant, about 28 years of age; good dispenser, competent to prescribe and take the management in absence of principal. Apply, with usual particulars and photo (to be returned), W. T. Frost, 125 Lee Road, Blackheath, S.E.

**L**ABORATORY.—Temporary assistance required in established business in provincial city; applicant would be well paid, but must have had working experience in preparations of ethers, fruit essences, extracts, confectionery colours, &c. Address, E. M. W., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**A**SSISTANT; must be gentlemanly, active, good salesman, and accurate dispenser, competent to manage in absence of principal; only those need apply whose references will bear investigation, and who have been accustomed to good-class Retail. To save time send full particulars and photo, Mr. Doubleday, Dorking, Surrey.

**W**ANTED, two good Juniors, at once. Apply in the Drug Department, York House, Waterloo Place, S.W., before 11 a.m.

**A**STEADY and industrious Junior Assistant, in a Mixed Retail business with Wholesale attached. Apply, with references, salary required (indoors), to W. Merry, Market Place, Ilkeston, near Nottingham.

**ASSISTANTS WANTING SITUATIONS.***1s. for twelve words; 6d. for every six words beyond.*

**A**S MANAGER or Assistant; well up in Dispensing and Prescribing; good hand at extracting teeth (outdoors). R. F. S., 133 Ladywood Road, Birmingham.

**W**ESTERN AUSTRALIA.—Advertiser, leaving in February for Freemantle, Perth, with 8 years' experience in Wholesale Drug, Drysaltery, Oil, and Colour trade, is open to undertake commissions; substantial references. Address, "Western," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

**M**ANAGER, Assistant, or in Wholesale; aged 30. A. B., 28 Seymour Place, Bryanston Square, London.

**L**ABORATORY.—Analyst desires engagement; 7 years' varied experience; 3½ years head chemist on large works; good testimonials and references; moderate salary. Craven, Laboratory, Staveley, Chesterfield.

**A**SSISTANT (or Dispenser to Surgeon); outdoor or sleep out; aged 25; 9 years' experience; good references. "Alpha," Ripley Hall, Bournemouth.

**A**S JUNIOR; 4 years' experience in Mixed business; good reference. W. Jones, Mr. Llewellyn, Chemist, Ogmrove Vale, Bridgend.

**A**S JUNIOR or Surgeon's Dispenser, with time for study; £1 monthly, indoors; nearly 8 years' good experience; aged 22. Jones, 2 Mostyn Street, Llandudno.

**S**ENIOR ASSISTANT; aged 26; disengaged; qualified; single; excellent references; state salary. J. Maxwell, Woodside Park, Annan, N.B.

**A**S MANAGER of Branch, or Assistant; temporary or permanent; can prescribe, extract teeth, &c.; good references; aged 32. "Omega," Warrington House, High Street, Lincoln.

**A**SSISTANT or Dispenser; can Prescribe and Extract Teeth; aged 27; permanency desired. H. J. H., 47 Station Road, Redhill.

**A**SSISTANT, Temporary or Manager; aged 30; single. "Quillaia," Mr. Shipp, Stokes Croft, Bristol.

**A**SSISTANT; aged 22½; 7 years' experience; churchman; disengaged. E. S., Maindee, Newport, Mon.

**E**VENING SERVICES given, where thorough Dispensing knowledge obtainable; 7 years' wholesale experience. Fardon, 8 Cicely Road, Peckham, S.E.

**A**S ASSISTANT, with a good knowledge of Mechanical Dentistry. J., 3 Springfield Terrace, Willesden Green.

**M**ASON, Chemist's Temporary Manager, Oxford, disengaged until Christmas; terms low; good references.

**W**ANTED, situation as Assistant; over 5 years' experience; good dispenser; reference. J. Thomas, 27 Chorley Old Road, Bolton.

**MISCELLANEOUS.**

*Special charges are made for Advertisements under this heading, which can be obtained on application.*

**All Advertisements should reach the Office, 42 Cannon Street, by 5 p.m. on Thursday afternoon, or first post on Friday morning of each week.**

**A** MOST VALUABLE AGENCY.—One Agent wanted in every town and village (where not already appointed) for Birley's preparations of Free Phosphorus; established 50 years; prescribed by medical men of first standing; unstinted supply of 40-page pamphlets, showcards, &c. Price-list and terms of agency, Gordon Murray & Co., 17 Castle Street, Holborn, London.

**M**R. CHARLES H. FEAST, formerly of Crowndale Road, Camden Town, Druggist, if living (or, if deceased, his representative), is requested to communicate with Mr. Sheldon D. Ashley, Solicitor, 11 Queen Victoria Street, London.



**BOXES—LIGHT WOOD BOXES.**—Boxes suitable for Chemists, for sending Bottles and all kinds of articles through the Post; strong Boxes made for Packing all kinds of articles; samples post free six stamps. Write for sample, giving size you require, stating whether hinged or sliding-lid boxes are wanted, to T. Casbon, Box Maker, Millfield Works, Peterboro'.

#### PRELIMINARY AND MINOR.

**ALL STUDENTS** who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. 32 Pupils passed the last Examinations.

# IMPORTANT NOTICE.

**ANY WHOLESALE OR RETAIL CHEMIST** who publishes a Monthly or Annual List of Prices for the use of the General Public (not the Trade), or Pocket Almanack, will oblige Messrs. A. ROWLAND & SONS, of 20 Hatton Garden, London, by sending them a copy of the last issue, and stating price of Advertisement to occupy page or half-page, facing matter or on outside back cover. Counter Bills can always be had

## ON APPLICATION.

TELEGRAPHIC ADDRESS: "Chemicus London."

TELEPHONE No. 1852.

# EXCHANGE COLUMN.

### TERMS.

Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of  $\frac{1}{2}$ d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or, if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of the CHEMIST AND DRUGGIST, 42 Cannon Street, E.C." and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1. 10s. 6d.

**NOTICE.**—In future no Advertisement will be inserted in this section for less than Sixpence.

Minimum price for any announcement, 6d.

**DEPOSIT OF MONEY.**—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us. We acknowledge receipt to both parties by post cards, and only pay the money deposited on the advice of the remitter. Whether returned to him or paid to the seller, we charge a commission of 6d. on any transaction of £3 or less, or 1s. if above that amount.

Remittances payable to **EDWARD HALSE**, at the G.P.O., London, and crossed **MARTIN & Co.**

### FOR DISPOSAL.

**NOTICE.**—In future no Advertisement will be inserted in this section for less than Sixpence. Minimum price for any announcement, 6d.

#### Dental.

Eleven pairs Tones' forceps, key and gum lancet, leather case, 30s. Gradidge, Chemist, Audover.

#### Optical.

52 pairs pebbles, 33 pairs tinted, 44 pairs odd (cost 1l. 18s.); Herbert & Godfrey's; what offers? Apply, "Optical," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

#### Drugs and Chemicals.

2 cwt. sound new garlic, cheap; 4d. small lots R. C. Mason, Bromsgrove.  
Morphia acetate, 11 ozs., guaranteed genuine; what offers above 25s.? W. S. F., care of Berdoe's, 30 Jewry Street, Aldgate.  
Carmine, finest quality, 2s. per oz., 25s. per lb., carriage paid. Peat, Chemist, Church, Lancashire.  
Cheap surplus drugs.—10 lb. hydrargyrum, 1s. 9d. lb.; 5 lb. ess. limonis, 6s. lb.; 3 lb. potassii iodid., 9s. lb. J. C., Lingdale, Skelton, R.S.O.

### Proprietary Articles.

In fair condition, but slightly soiled, 20 bottles African hair restorer, 1s. size; two Gabriel's mouth wash, 5s.; 13 Gabriel's sedadent cure for toothache, 1s. 1½d.; 3 Hilton's regulating pills, 1s. 1½d.; 4 Hall's voltaic electric plaster, 2s. 9d.; 1 Gowland's lotion, 2s. 9d.; 2 Carlsbad salts, 2s. 3d.; 1 Cooper's syrup camphor, 1s. 1½d.; 1 Squire's original grand elixir, 1s. 1½d.; 3 Bateman's (Dicey's) drops, 1s. 1½d.; 1 Dr. Radcliffe's elixir, 1s. 1½d.; 2 Daffy's elixir, 2s.; 1 ditto, 2s. 9d.; 2 Spencer's pulmonic elixir, 1s. 1½d.; 1 Lambert's asthmatic elixir, 1s. 1½d.; 4 While's aperitive seeds, 1s. 1½d.; 1 Oldridge's balm Columbia, 3s. 6d.; 4 Jones's Tremadoc pills, 1s. 1½d.; 10 Jones's (Carmarthen) patent pills, 1s. 1½d.; 8 Cross's neuralgic remedy, 1s. 1½d.; 2 Quincy's Parisian hair restorer, 3s. 6d.; 3 Northern cure rheumatism, 1s. 1½d.; 4 jettine, 1s.; 3 Hassell's sponge powder, 6d.; 2 Goddard's boot-top powder, 1s.; 3 Astley Cooper's restorative, 2s. 9d.; 6 Harriess' harness compo, 1s.; 5 ditto, 1s.; 2 injection Brou, 4s. 6d.; 2 hydroleine, 4s. 6d. (hydrated oil); 11 West-end blacking, 6d.; 20 ditto, 3d.; 4 Squire Knight's heartburn tablets, 1s. 1½d.; 2 eclectic, 1s. 1½d.; 2 eclectic lozenges, 1s. 1½d.; 4 Dudgeon's chilblain remedy, 1s. 1½d.; 2 De Roo's renal pills, 1s. 1½d.; 1 ditto, 2s. 9d. Offers for any part or lot to Wesley Jones, Chemist, Llanelly.

Three or four dozen patents; cheap; send for list. Butler, Chemist, Reading.

12s. 6d. Scott's electric hair-brush, new, 6s. Gradidge, Chemist, Andover.

Few gross Allcock's porous plasters, 6s. 6d. dozen; Ferguson's glycerine balm, 1s. 6d. dozen, carriage paid. 93/33.

### Soda-water Machinery.

Second-hand wire soda-water stand; cheap; holds 15 dozen. R. P., 156 Clapham Road.

Engine, boiler, soda-water machine, generator, gasometer, filling machines for cork and patent bottles; good working order; price 55l. Hill, Chemist, Cheltenham.

For sale cheap, or exchange, a six-bottle Macdonnell's filling-machine, with all extra parts complete, for bottling aerated waters; can be seen at work at any time. Carter & Co., Soda-water Works, Bristol.

### Educational.

"Family Physician," last edition, quite new, will take 1l. or exchange. Williams, 270 Moseley Road, Birmingham.

"Oil and Colourman's Diary," 2s. 6d.; "British and Colonial Diary," 2s. 6d.; free. Brooks, Chemist, Lonth.



**Literature.**

2½ years' *American Druggists' Circular*, 1882-3-4 ;  
1 year's *Chicago Pharmacist*, 1883. What  
offers? Crook, Mirfield.

Dr. Ure's Dictionary, 4 vols., 7th edition, never  
used, cost 7l. 7s.; what offers? Place,  
Betley, Crewe.

*Pharmaceutical Journal* posted day after re-  
ceived; what offer? Jones, 28A Archer  
Street, W.

**Shop Fittings.**

Six handsome show-globes, 3 bent-glass cases,  
for sale or exchange. Gibson, Gooch Street,  
Birmingham.

Second-hand Fittings. — 1 range drug drawers,  
1 Spanish mabogany counter, 2 ma-  
hogany ditto, 3 mabogany-top ditto, 3  
counter-cases, 5 upright counter-cases, 2  
wall glass cases, 3 window enclosures,  
shop-front sash, 2 chandeliers, 2 pendants,  
3 specie jars, 12 carboys, drug scales, 15  
doz. rounds and pots, 30 doz. labelled ditto;  
a set of surgery fittings, drawers, shelving,  
counter, bottles, pots, and contents. W.  
Hawke & Son, Wild Court, London, W.C.

**Formulae.**

Set of 12 to 15 practical receipts for treatment  
of gonorrhoea, gleet, syphilis, secondaries,  
and every variety of venereal disease, with  
full instruction for diagnosis, 3s. 6d.; con-  
sumption mixture, very successful, 1s. 6d.  
A. Johnson, 64 Furness Hill, Sheffield.

Please note this!!!—Seasonable proprietaries;  
make your own from Brooks's Formulae,  
warranted elegant and excellent—"Influenza  
Mixture," acts like magic, pleasant and safe;  
"Glycerine Cream" (like Beetham's), rapidly  
cures chapped hands, frost-bites, &c., render-  
ing skin like velvet; "Hop Tonic," better  
than any other, can be made instantly, costs  
1s. lb.; "Canadian Cone," certain cure for  
chilblains, sweet and cleanly; "Bronchelixir,"  
rapidly gives relief in bronchitis and chest  
affections, wonderful remedy; "Cough Lin-  
tus" (Glycerine), gives instant ease, and cures  
rapidly, pleasant taste, good proprietary;  
"The Jubilee Sauce," universally liked, most  
luscious, renders cold meat a luxury, differs  
from any other, costs under 6d. a pint;  
recipes 1s. 1d. each, 3 for 2s. 6d. Special  
offer. — Cut this out and above will be sent  
(as sample) for 5s.; list free. Tom Brooks,  
Chemist, Louth.

**Miscellaneous.**

Two-guinea head-rest (Ash's), as good as new;  
what offers? 96/35.

Thompson & Statham's disintegrator, small size  
(No. 5); cost 20l.; has not been used; price  
5l., free on rail. 94/40.

Twelve "left" trusses, 9 "right," 3 double, 1  
Mocmain; soiled, otherwise right; lot for  
10s. here. Wesley Jones, Chemist, Llanelly.

A Maw's galvanic machine, cost 2l. 10s., winds  
up with key, wants slight repairing; what  
offers? 96/35.

An "Enterprise" tincture-press, equal to new,  
7s. 6d. Tyhar, 31 Yates Street, Aston,  
Birmingham.

½-gall. copper measure, 1-gall. iron tincture press,  
specie jars, carboys. Write, Morgan, Here-  
ford.

Pindar's rotary pill-machine, with press; cost  
10l. 10s.; equal to new; cash 5l., or exchange  
for Pfeiderer's machine. R. Lacy, Chemist,  
Thetford.

Second-hand sea medicine chest, as Maw's fig. A,  
deal, few bottles missing, price 15s.; also  
several ounces tereb. chia. ver. at 1s. 4d.  
Sydney Court, King's Lynn.

Ornamental shop stove, not been used, height  
29 inches, price 25s.; Maw's pill-coating  
machine, 21s.; Royal "Meteor" trieyele,  
9l. 9s. Baker, 33 Norfolk Terrace, Bays-  
water, W.

Paints in 1 and 2 lb. tins, 20s. cwt., good; 2 cigar  
cases, 1 with 7 and other with 4 partitions;  
embossed glass doors for druggist's window;  
good black lead, 4s. cwt.; paraffin chimneys,  
&c. almost given away; bins and cisterns, all  
sizes; long counter, with drawers; French  
caramel, 10s. cwt.; office rack for books,  
Newham & Co., Sheffield.

Denman's "Midwifery" (elaborate), 2s. 6d.; kip  
of wash leathers, 6s. doz., will sell well at 1s.;  
this is surplus stock, never been loosed out,  
quite new, and not soiled; a handsome  
dispensing tablet for top of counter, enclosed  
in mabogany frame, shelves at back, labelled  
"Dispensing Department," in gold on cream,  
with flesh-colour margin enclosed in gold;  
size 5 ft. long 22 in. high, 1l. 10s. includes  
packing. Williamson, Chemist, Grimsby.

Lawrence's spectacles, at 2s. 6d., 3s. 6d., 5s. 6d.,  
7s. 6d., 10s. 6d., 21s., 30s., 40s., 70 per cent,  
discount; good currant cleaner, 15s.; mill  
for crushing Indian corn, &c., in good con-  
dition, 15s.; surgeons' labels, 10l. per 1,000  
packet; Maw's pill-coater, fig. A, p. 441,  
with indiarubber band, 12s. 6d.; 1 gross  
Seabury & Johnson's belladonna porous  
plasters, 3s. 6d. per dozen; 100 boxes Sea-  
bury & Johnson's mustard leaves, 3s. 6d.;  
6 boxes Maw's wafer paper, 1s. 6d.; 2 Fan-  
shaw & Jaques' hand emollient, 1s.; 2 bottles  
Coleman's extract meat and malt wine, 3s.;  
several gross 1d. packets Edison's starch  
gloss, blue and red packets, 4s. gross; two  
mills, on stands, for grinding seeds, &c.,  
12s. 6d. each; 1 tea-mixer, 12s. 6d.; 7 lbs.  
red gum—what offer? 56 lbs. Irish moss—  
what offer? W. Gregory, Wellington,  
Somerset.

Squire's "Companion Pharmacopoeia," capital  
condition, 4s. 9d.; Thomas's "Treatise on  
all Diseases," two volumes, 5s.; Meadows'  
"Anglo-French Pronouncing Dictionary,"  
copious introduction, 2s. 9d.; Byron's  
Poetical Works, including memoir, sup-  
pressed and attributed poems, often omitted,  
neatly bound, sound, 3s.; "Shakespeare"  
complete, memoir, forty steel engravings,  
gilt edges, nearly new, 5s.; 24 ounces black  
ivory, what offer? Campbell's and Gold-  
smith's Poems, handsome leather binding,  
good condition, illustrated, 3s. 6d.; Ains-  
worth's Latin Dictionary, 1s. 6d.; How-  
ship's "Surgical Diseases," sound, 1s. 6d.;  
Chapman's "Domestic Homoeopathy," pub-  
lished 5s., 1s. 6d.; Ollendorff's "Method  
Learning French," published 6s. 6d., 1s. 6d.;  
killing machine, cost 8l., what offer? in-  
side mahogany case, 7 feet high, 22 inches  
broad, 5 deep, what offer? Books carriage  
free; postal orders. Keeley, 39 Fairfax  
Road, Fampstead.

Surplus stock—1 lb. 12 oz. liq. secalæ (Battley's);  
10 oz. glyc. acid. pepsinæ (Bullock's); 14 oz.  
ext. bele liquid; 10 oz. liq. ext. cinchon.  
flav.; 1 lb. liq. cinchon. rub.; 6 oz. lin. capsici  
(Turnbull's); 5 oz. ext. fillicis; 3 oz. iodo-  
form; 6 oz. lin. sinapis eo.; 1 lb. 3 oz. liq.  
santal. buchu, et cubebæ (Hewlett's); 12 oz.  
mist. pepsine eo. c. bismuth. (Hewlett's);  
3 oz. liq. cinchon. cord. (Battley's); 5 oz.  
liq. cinchon. pallid. (Battley's); 4 oz. liq.  
emp. cantharid. (Smith's); 6 oz. mist. cerii  
eo. (Mackay); ½ lb. mist. lac bismuth. et  
cerii (Syme's); 1 oz. ol. sinapis essent.; 5 oz.  
ol. lavand. (Mitcham); 1 oz. ol. anthemid.;  
1½ oz. ol. menth. virid.; 4½ oz. ol. santali.  
flav. (Ang.); 8 oz. ol. cubebæ; 4 oz. plumb.  
iodid.; 14 oz. tr. aconite (Fleming's); 1½  
lb. tr. gelsenii (Richardson's); 14 oz. syr.  
acid. hydriod. (Gardner's unalterable); 1 lb.  
syr. ferri, quinae, et strychniae hydrochrom.  
(Fletcher's); 9 oz. tr. cinchon. rub.; 10 oz.  
tr. hamamelis; 8 oz. tr. guarana; 9 oz. ol.  
cerri liq.; all at 33 per cent. off list prices.  
Christian, Middleton, Lane.

**WANTED.**

Outside lamp and bracket, Lodge, Chemist,  
Rotherham.

Four pear-shape stoppered carboys (must be  
cheap), 6 or 8 gallons. 100/22.

Gordon's extract, few dozen; Rooke's and  
Crosby's elixir. 100/30.

Complete copies of *The Chemist and Druggist*  
for November 27, 1886; full price (4d.)  
given; affix label on wrapper. 40/20.

Bent glass counter case, 3 or 4 feet long, with  
shelf; must be cheap; particulars. Rough-  
ton, Sheepshed, Loughborough.

Novelty for shop window, mechanical or other-  
wise. Llewellyn, Chemist, Ogmores Vale,  
Bridgend.

Liebig's cocoa, any size; state lowest price.  
Phillips, "The Pharmacy," Ashton-under-  
Lyne.

"Whitla's Pharmacy," *Chemist and Druggist*  
*Directory*, 1883. Price to care of Shattock,  
Chemist, Taunton.

Two nests of drawers and shelving to match, or  
drawers only, 11 ft. and 15 ft. each. Bennett,  
Chemist, Barrow-in-Furness.

Street lamp; good counter, wide top; mahog-  
any wall-case, about 7 feet long, 6 feet  
high, 9 inches deep. Dimensions, condition,  
and price to 100/35.

*Chemist and Druggist*, posted Tuesday after  
publication, in exchange for *British and*  
*Colonial Druggist*, commencing Dec. 14.  
Henry Lloyd, Broadhempston, Totnes.

New or second-hand, nest mahogany-fronted  
drawers, lockers under, 4 ft. 5 in. long, and  
about 3 ft. high; 10 ft. run glass wall-casing,  
4 ft. high; also mahogany-top druggist's  
counter, fitted with drawers, 8 ft. 6 in. long,  
with flap; manufacturers may reply, giving  
sketch and estimate. Robinson, Chemist,  
Haworth, Keighley.

Suppository, bougie, and pessary moulds; pill,  
3-pint and 13-pint Wedgewood mortar; in-  
fusion jugs; evaporating dishes; water  
bath, lined earthenware; pill and ointment  
knives; large iron mortar; 2-grain pill  
machine and finishers; gallon tincture press;  
gask stove; dispensing scales and weights;  
cork bo. ers; lemon squeezers; stamped  
Payne's measures; plaster iron; root cutter;  
sieves; glass percolator; counter scales and  
weights, ½ oz. to 2 lbs.; British Pharma-  
copoeia and Beasley's "Recipes" and  
"Formulae," latest editions; must be  
in good condition. Full particulars to  
"Enterprise," Wesley House, Broad Street,  
Nottingham.